THE LANCET.

A Journal of British and Foreign Medicine, Surgery, Obstetrics, Physiology, Chemistry, Pharmacology, Public Health, and News.

TELEGRAPHIC ADDRESS—LANCET, LONDON TELEPHONE NUMBER—5356 GERRARD

No. XVI. of Vol. I., 1912.
No. 4625. Vol. CLXXXII. LONDON, SATURDAY, APRIL 20, 1912. Pp. 152—Price 6d.

ROYAL SOCIETY OF MEDICINE.

Temporary Address, during building of new house,
15, CAVENDISH SQUARE, W.

DIARY of MEETINGS on page 1106.

PLEASE NOTICE
THE LANCET Review of last week
OF THE

NEW EDITION TAYLOR'S MEDICINE.

"*The following subjects are new in this Edition. ..... We have looked closely at all these descriptions, and they afford clear, accurate, and succinct accounts of the conditions in question. We are glad to find there is still room for a text-book on medicine written by one author rather than by a series of writers, since the personal note of experience gives a continuity which is desirable. The book deserves the success that it has achieved and will maintain.*"

8 Skiagram Plates, 46 Text-figures, 1137 pages. 18s. net.
London: J. & A. Churchill, 7, Great Marlborough-street.

OXFORD MEDICAL PUBLICATIONS.

NEW WORKS JUST PUBLISHED.

COMMON DISORDERS AND DISEASES OF CHILDHOOD (Still). 2nd Edition.
SALVARSAN IN SYPHILIS AND ALLIED DISEASES (McDonagh).
DISEASES OF THE EYE (Mayou). 2nd Edition.
THE CARE OF THE SKIN IN HEALTH (Jamieson).
TUBERCULIN TREATMENT (Riviere, Morland). [See Page 3.]

WORKS by Dr. HARRY CAMPBELL.

HEADACHE, ETC.
FLUSHING AND MORBID BLUSHING.
DIFFERENCES IN THE NERVOUS ORGANISATION OF MAN AND WOMAN.
H. K. Lewis.
ON TREATMENT. Third Impression.
Baillière, Tindall.

By FREDERICK J. McCANN, M.D.Edin., F.R.C.S.Eng., Samaritan Free Hospital for Women, London, N.W.

CANCER OF THE WOMB: ITS SYMPTOMS, DIAGNOSIS, PROGNOSIS, AND TREATMENT.

Fully illustrated. 20s. net.

Liverpool Medico-Chirurgical Journal.—"Cancer of the Womb, by F. J. McCann, is a book that can be recommended alike to the general practitioner and the specialist. Written in a fluent manner, it embodies the ripe experience of a renowned operator, trained observer, and patient investigator."

Edinburgh Medical Journal.—"The book is one of very great merit; it will be read with interest both by the specialist and general practitioner as an authoritative exposition of the important subject with which it deals."

Practitioner.—"Dr. McCann has produced a valuable work which deserves to be widely known."

St. Bartholomew's Hospital Journal.—"The plates are excellent. This is a book we can thoroughly recommend."

London: Henry Frowde and Hodder & Stoughton.

THE FOOD FACTOR in DISEASE, including

the Pathology and Treatment of Bilious Attacks, the Paroxysmal Neuroses (Migraine, Asthma, Angina Pectoris, &c.), Gout, High Blood-pressure, &c. By Francis Hare, M.D., Consulting Physician, Brisbane Hospital. For abstract see The Lancet review—Feb. 17th, 1906, pp. 453 to 455.—Longmans, Green & Co. In two volumes. Price 30s. net.

THE PARIS MEDICAL SCHOOL. By

A. A. Warden, M.D., Visiting Physician to the Hertford British Hospital. 2nd Ed. With Map. Price 2s.
"Contains a host of information."—The Lancet.
London: J. & A. Churchill.

By H. BELLAMY GARDNER, M.R.C.S.Eng.

SURGICAL ANÆSTHESIA.

With full instructions for the open ether method.
"A capital exposition of the principles and practice of anæsthesia."—The Lancet. Messrs. Baillière, Tindall & Cox. Price 5s.

SIGHT TESTING FOR THE GENERAL

PRACTITIONER. By F. Davidson. Fifth Edition. Tenth Thousand. A practical Manual on Subjective Testing and Retinoscopy. Price 2s. 6d. net; by post 2s. 8d.
Sold to medical men only, and published by
F. Davidson & Co., 29, Great Portland-street, London, W.

Ready Next Week.

FOR and AGAINST

EXPERIMENTS ON ANIMALS.
Evidence before the Royal Commission on Vivisection.
By STEPHEN PAGET, F.R.C.S.,
Senior Secretary, Surgical Section, Royal Society of Medicine; Hon. Secretary, Research Defence Society, &c.
With an Introduction by the Right Hon. the Earl of Cromer, O.M.
Crown 8vo. 3s. 6d net; post free, 3s. 9d.
London: H. K. Lewis 136, Gower-street, W.C.

SAUNDERS' BOOKS ON

GENITO-URINARY DISEASES.

See Saunders' Advertisement on Page 5.

OPERATIVE TREATMENT of FRACTURES.

By W. ARBUTHNOT LANE, M.S.
In large clear type. Demy 4to. 7s. 6d
By the same Author.
CLEFT PALATE AND HARE LIP. 5s.
"Mr. Lane makes out a clear case for early and almost immediate operation. To sum up: Mr. Lane has absolutely proved his contention, and rendered it quite clear, that early operation is the right course on every ground, developmental and otherwise; and further, that delay in performing staphylorrhaphy until the third to the sixth year is fraught with most harmful results, and should not be permitted."
—British Medical Journal, Jan. 27th, 1906.
The Medical Publishing Company, Ltd., 22½, Bartholomew Close, E.C.

By the same Author.
THE OPERATIVE TREATMENT OF CHRONIC CONSTIPATION.
Nisbet & Co., 22, Berners-street, W.

DISEASES OF THE SKIN.

By Sir MALCOLM MORRIS, K.C.V.O.

Fifth Edition. Revised by the Author, with the help of S. Ernest Dore, M.D., M.R.C.P.

With 10 Colour and 67 Black-and-White Plates.

16th Thousand. 10s. 6d.

"The deservedly high reputation of this book will be fully maintained by the new edition."—British Medical Journal.

"This, the fifth edition ..... will more than maintain the reputation of its predecessors."—The Lancet.

Cassell & Co., Ltd., La Belle Sauvage, London, E.C.

A SURGICAL TREATMENT of LOCOMOTOR ATAXIA.

By L. N. DENSLOW, M.D.,
Fellow of the New York Academy of Medicine; late Physician, Diseases of the Skin (Out-patients), Bellevue Hospital, New York; late Professor, Genito-Urinary Surgery, St. Paul's Medical College; Member of British Medical Association. Pp. x. + 118. Price 3s. 6d. net.
Baillière, Tindall & Cox, 8, Henrietta-street, Covent Garden, London.

Just Published. Royal 8vo. Price 15s. net.

BY HASTINGS GILFORD, F.R.C.S.

THE DISORDERS OF POST-NATAL GROWTH AND DEVELOPMENT.
"A great book, wide in its scope, great in its aim, and excellent in its execution."—Professor Keith, in MAN.
"Not only crammed with information, but most enjoyable to read."
—The Medical Review.
Adlard & Son, 23, Bartholomew Close, London, E.C.

By SAMUEL WEST, M.D., F.R.C.P.

GRANULAR KIDNEY and PHYSIOLOGICAL ALBUMINURIA.

H. J. Glaisher. 7s. 6d. net.

Third Edition. Demy 8vo. Price 5s. net; by post, 5s. 4d.

INDIGESTION: The Diagnosis and Treatment of the Functional Derangements of the Stomach. By

George Herschell, M.D.Lond.
London: H. J. Glaisher, 55 and 57, Wigmore-street, W.

DIORADIN IN TUBERCULOSIS

See "The British Medical Journal" of July 8th, 1911, and "The British Journal of Tuberculosis," January, 1912.

DIORADIN is a combination of radio-active iodine with menthol. Its principal therapeutic action is due to the radium it contains. It is essentially anti-bacillary in action. Ether being the excipient, the radium and the iodine are eliminated slowly by the lungs, and thus in pulmonary tuberculosis act locally at the seat of the lesion.

DIORADIN

1. Destroys the bacillus of Koch.
2. For Tuberculous Glands.
3. For Tuberculous Laryngitis.
4. Diminishes the sputum, suppresses the temperature, abolishes fever and night sweats.
5. Rapidly destroys streptococci.
6. Increases the weight.
7. Gives a feeling of strength and renewed life.
8. Improves the general condition.

LITERATURE, EXCLUSIVELY FOR THE MEDICAL PROFESSION, FREE ON APPLICATION.

DIORADIN AGENCY. 133, OXFORD STREET, LONDON, W.

"Sauermilch"

THE PREMIER Lactic Acid or Soured Milk Preparation.

Prepared in our own Milk Laboratories under the direct control of a skilled bacteriological staff

WELFORD & SONS (Dairy Company), Ltd.

Chief Offices and Milk Laboratories : : : ELGIN AVENUE, LONDON, W.

Principal Telephone: "Paddington 5440" (2 Lines). Telegraphic Address: "Welfords, London."

By Royal Warrants

To H.M. King George V. To H.M. Queen Alexandra.

Jeyes' Disinfectants

As used in the Royal Households, Stables and Kennels.

May be obtained in the form of

FLUID, POWDER AND SOAP.

JEYES' FLUID (Non-Poisonous)—In Bottles, Tins, Drums and Casks.

JEYES' POWDER—In Canisters, Packets, Bags and Casks.

JEYES' SOAPS—In Bars and Tablets, for the **Household** and **Toilet.**

JEYES' SPECIAL FLUID—CYLLIN—The strongest fluid Disinfectant on the Market. Its germicidal efficiency is guaranteed to be thirty times that of Carbolic Acid, and eighty times that of Formalin, when tested against a vigorous culture of the plague organism (B. pestis). Cyllin is further guaranteed to be **at least** ten times less toxic than Carbolic Acid. In Bottles, Tins, Drums, and Casks.

CYLLIN PREPARATIONS.

Cyllin (Medical)—Cyllin Palatinoids—Cyllin Inbalant—Lano-Cyllin—Cyllin Dusting Powder—Cyllin Syrup—"Cyllinettes" (Sanitary Towels)—Cyllin Pastilles—Cyllin Lint, Wool, Gauze, Gauze Tissue, Cotton Fibre, Cyllin Obstetrical Lubricant.

Jeyes' Sanitary Compounds Co., Ltd., 64, Cannon Street, London, E.C

THE LANCET.

No. 4625. Vol. CLXXXII. LONDON, SATURDAY, APRIL 20, 1912. Pp. 152.

CONTENTS.

The whole of the literary matter in THE LANCET is copyright.

GOULSTONIAN LECTURES on Modern Views upon the Significance of Skin Eruptions. Delivered before the Royal College of Physicians of London by H. G. ADAMSON, M.D. Lond., F.R.C.P. Lond., Physician for Diseases of the Skin, St. Bartholomew's Hospital.—Lecture III.—*(Illustrated)*... 1041

ORIGINAL ARTICLES.

Mosquitoes and River Vessels. By ANDREW BALFOUR, M.D., B.Sc. Edin., F.R.C.P. Edin., D.P.H. Camb., Medical Officer of Health, Khartoum. —*Illustrated)* 1048

On Radium Emanation in Mineral Waters. By T. PAGAN LOWE, M.R.C.S. Eng., L.R.C.P. Edin., Surgeon to the Royal Mineral Water Hospital, Bath 1051

Vaccine-Therapy in Rheumatoid Arthritis. By THOMAS J. HORDER, M.D. Lond., F.R.C.P. Lond., Assistant Physician to St. Bartholomew's Hospital 1053

The Recurrence of Adenoids. By THOMAS GUTHRIE, M.A., M.B., B.C. Cantab., F.R.C.S. Eng., Honorary Aurist and Laryngologist, Victoria Central Hospital, Liscard, and Royal Liverpool Country Hospital for Children; Clinical Assistant, Throat Department, Royal Infirmary, Liverpool.—*(Illustrated)*..... 1054

Volvulus of the Spermatic Cord. By ADAMS A. MCCONNELL, B.A. (Sen. Mod.), M.B. Dub., F.R.C.S. Irel., Assistant Surgeon, Richmond Hospital, Dublin; Lecturer on Applied Anatomy, Medical School, Trinity College, Dublin.—*(Illustrated)* 1055

The Treatment of the Early Stages of Senile Cataract. By HENRY SMITH, M.D. R.U.I., V.H.S., Lieutenant-Colonel, I.M.S..... 1056

reatment by Means of Mechanical Therapeutics at the Edgar Allen Institute, Sheffield. By RODOLPH ABERCROMBIE, M.D. Camb., Medical Director, Edgar Allen Institute for Medico-Mechanical Treatment, Sheffield 1076

CLINICAL NOTES:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

Note on a Case of Mumps. By F. DE HAVILLAND HALL, M.D. Lond., F.R.C.P. Lond., Senior Physician to Westminster Hospital 1057

Irritant Poisoning from Chewing the Shoots and Leaves of *Dieffenbachia Seguina*. By ALEX. NAPIER, M.D. Glasg., F.R.F.P.S. Glasg., Physician, Victoria Infirmary, Glasgow; Examiner in Medicine, Glasgow University 1058

MEDICAL SOCIETIES.

HUNTERIAN SOCIETY: The Therapeutic Value of Alcohol 1058

WEST LONDON MEDICO-CHIRURGICAL SOCIETY: Rheumatoid Arthritis 1059

BRIGHTON & SUSSEX MEDICO-CHIRURGICAL SOCIETY: Exhibition of Cases and Specimens 1060

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY: Obturator Hernia 1060

LIVERPOOL MEDICAL INSTITUTION: Coliform Organisms in the Female Bladder, and their Relation to Pathogenic Conditions..... 1061

REVIEWS AND NOTICES OF BOOKS.

Fourth Report of the Wellcome Tropical Research Laboratories, Khartoum. Dr. Andrew Balfour. Vols. A. and B. 1061

Second Review of Recent Advances in Tropical Medicine, Hygiene, and Tropical Veterinary Science, being a Supplement to the Fourth Report of the Wellcome Research Laboratories, Khartoum. 1061

Direct Laryngoscopy, Bronchoscopy, and Œsophagoscopy. By Dr. W. Brünings 1062

Practical Anatomy; the Student's Dissecting Manual. By F. G. Parsons, F.R.C.S. Eng., and William Wright, M.B. Vict., D.Sc., F.R.C.S. 1063

Minor Surgery. By Leonard A. Bidwell, F.R.C.S. Eng. .. 1063

A Manual of Midwifery. By T. W. Eden. M.D., C.M. Edin., F.R.C.P. Lond., &c. Third edition. 1064

La Méningite Cérébro-Spinale. Par M. Arnold Netter, et M. Robert Debré 1064

La Pratique Neurologique. By Prof. Pierre Marie and others 1065

A Junior Course of Practical Zoology. By the late A. Milnes Marshall, M.D., &c. and the late C. Herbert Hurst, Ph.D. Seventh edition 1065

My System: Fifteen Minutes' Work a Day for Health's Sake. By J. P. Müller. Third edition 1065

The Way with the Nerves. By Joseph Collins, M.D..... 1066

The Prescribing of Spectacles. By Archibald Stanley Percival, M.A., M.B., M.C. Cantab. Second edition..... 1066

Bacteria as Friends and Foes of the Dairy Farmer. By Wilfrid Sadler 1066

The British Red Cross Society First-Aid Manual. No 1. By James Cantlie, M.A., &c.... 1066

Psyche and Other Poems 1066

Nursery Rhymes 1066

The Graven Palm, a Manual of the Science of Palmistry 1067

Biometrika: a Journal for the Statistical Study of Biological Problems. Edited by Karl Pearson..... 1067

LEADING ARTICLES.

REPORT FOR 1910 OF THE MEDICAL OFFICER OF HEALTH OF THE ADMINISTRATIVE COUNTY OF LONDON 1068

HOSPITALS AND HOSPITAL FUNDS 1069

ARSENIC AND MURDER BY POISONING 1070

ANNOTATIONS.

The Disaster to the "Titanic" 1071

National Insurance against Sickness in Russia 1071

Safety Air in Coal Mines 1072

Consular Medical Reports from China 1072

The Value of Tuberculin in Pulmonary Tuberculosis 1073

Spices 1073

Myelitis as a Complication of Erysipelas 1074

March at Home and Abroad ... 1074

Intestinal Perforation in Convalescence from Typhoid Fever Simulated by Pneumonia 1075

An Antivaccination Bill 1075

A Universal Gazette of Medical Literature 1076

VITAL STATISTICS:

Health of English Towns ... 1083

Health of Scotch Towns..... 1084

Health of Irish Towns 1085

Vital Statistics of London during March, 1912 1085

Analysis of Sickness and Mortality Statistics in London during March, 1912 1086

SPECIAL ARTICLES.

The Metropolitan Hospital Sunday Fund and St. George's Hospital: Sir Thomas Crosby's Report 1077

The International Congress on Tuberculosis at Rome 1078

Asylum Reports..... 1080

Royal College of Surgeons of England: Meeting of Council 1081

The London County Council and Medical Affairs: Report by the School Medical Officer on Open-air Schools.. 1081

Central Midwives Board..... 1082

The Services..... 1087

The Fifteenth International Congress of Hygiene and Demography 1092

Manchester..... 1093

Ireland 1093

Paris 1094

Italy 1095

Budapest 1095

United States of America..... 1096

Notes from India 1097

THE NATIONAL INSURANCE ACT.

Scottish Medical Insurance Council..... 1099

Shoreditch Medico-Ethical Society 1099

Lewisham Provisional Medical Committee 1099

CORRESPONDENCE.

Psychiatry in England: its Present State and its Outlook (Dr. Edwin Goodall).... 1089

The Formation of Local Medical Committees (Dr. Edgar Du Cane)..... 1090

The Bed Isolation of Cases of Infectious Disease (Dr. John Biernacki, Dr. A. H. G. Burton) 1090

Internal Secretions and the Principles of Medicine (Prof. C. E de M. Sajous) 1091

The Nomenclature of Diseases (Mr. Sydney W. Macilwaine) 1092

The Legislative Control of Patent Medicines (Dr. W. A. Brend) 1092

Sudden Recovery of Sight: a Coincidence (Dr. R. F. Licorish) 1092

Cæsarean Section for Double Monstrosity (Mr. David Ligat) 1092

The Admiralty Test for Colour-Blindness (Mr. J. Herbert Parsons) 1092

Second Wind 1105

OBITUARY.

Sir James Jenkins, K.C.B., M.D. Glasg., M.R.C.S. Eng .. 1098

Donald Campbell, M.D. Glasg. 1098

Deaths of Eminent Foreign Medical Men 1099

MEDICAL NEWS.

Brighton and School Medical Inspection.. 1048

The Society for the Study of Inebriety 1061

Newton Abbot (Devon) Workhouse Infirmary 1067

The Royal Sanitary Institute 1067

Foreign University Intelligence..... 1067

International Moral Education Congress 1076

Literary Intelligence 1076

Donations and Bequests 1096

Pass lists of the Examining Board in England by the Royal Colleges of Physicians of London and Surgeons of England, the University of London, the University of Liverpool, and the University of Glasgow 1100

Royal College of Surgeons in Ireland 1102

Hunterian Society 1102

Gloucestershire Royal Infirmary. 1102

Devon and Cornwall Ear and Throat Hospital, Plymouth 1102

The National Hospital for the Paralysed and Epileptic 1102

University of London 1102

Queen's Hospital, Birmingham 1102

PARLIAMENTARY INTELLIGENCE.

Notes on Current Topics..... 1102

House of Commons 1103

Books, &c., received..... 1103

Appointments..... 1104

Vacancies..... 1104

Births, Marriages, and Deaths 1105

Notes, Short Comments, and Answers to Correspondents.. 1105

Medical Diary 1106

Acknowledgments of Communications received..... 1108

FOR INDEX TO ADVERTISEMENTS SEE PAGES 2 & 4.

INDEX

MEDICAL AND OTHER BOOKS AND PUBLICATIONS

PAGE

ADLARD & SON:—
Gifford..... Disorders of Post-Nasal Growth, &c. .. Cover 1

BAILLIERE, TINDALL & COX:—
Bidwell .... Intestinal Surgery 6
Campbell .. Treatment ..... Cover 1
Denslow .... Treatment of Locomotor Ataxia ..... Cover 1
Eccles ..... Hernia. &c 7
Freyer ..... Enlargement of the Prostate 7
" ..... Urinary Organs..... 7
Gardner .... Surgical Anæsthesia ..... Cover 1
Giles ..... Abdominal Operations.. 7
" ..... Gynæcological Diagnosis 7
Marshall .... Syphilology, &c. 7
Thorne..... Nauheim Treatment of Diseases of the Heart. 7

CASSELL & CO:—
Herman .... Diseases of Women 8
Morris ..... Sir M. .... Diseases of Skin. Cover 1

CHURCHILL, J. & A.:—
Taylor's Medicine .... Cover 1
Warden .... The Paris Medical School ..... Cover 1

PAGE

CONSTABLE & CO.:—
Wright, Sir A. E.. Handbook of Technique of the Teat and Capillary Glass Tube 6

FROWDE AND HODDER & STOUGHTON:—
Bidwell .... Minor Surgery 8
Jamieson.... The Care of the Skin in Health 5
Lockwood .. Aseptic Surgery..... 6
" .. Clinical Surgery 6
McCann .... Cancer of the Womb, &c..... Cover 1
McDonagh .. Salvarsan in Syphilis and Allied Diseases.. 3
Mayou ..... Diseases of the Eye.... 5
Riviere & Moriand .. Tuberculin Treatment. 3
Still ..... Common Disorders and Diseases of Children. 5

GLAISHER:—
Herschell .. Indigestion .... Cover 1
West ..... Granular Kidney and Physiological Albuminuria ..... Cover 1

LEWIS:—
Campbell .... Headache ..... Cover 1
" .... Flushing, &c. .... " 1
" .... Differences in Nervous Organisation of Man and Woman .. Cover 1

PAGE

LEWIS—(Continued.)
Lewers..... Diseases of Women 6
" ..... Cancer of the Uterus .. 6
Paget ..... For and Against Experiments on Animals Cover 1

LONGMANS, GREEN & CO.:—
Hare ..... Food Factor in Disease, &c..... Cover 1

MACLEHOSE & SONS (GLASGOW):—
Macewen, Sir W. .... Growth of Bone..... 6

MACMILLAN & CO.:—
Lockwood .. Appendicitis 6

MEDICAL PUBLISHING CO.—
Lane..... Operative Treatment of Fractures .... Cover 1
" ..... Cleft Palate and Hare Lip ..... Cover 1

NISBET & CO.:—
Lane..... Treatment of Chronic Constipation .. Cover 1

OXFORD MEDICAL PUBLICATIONS..... Cover 1

PAGE

SAUNDERS COMPANY:—
Greene & Brooks.... Diseases of Genito-Urinary Organs and Kidney 5
Oertel ..... Bright's Disease 5
Pilcher..... Practical Cystoscopy .. 5
Saunders' Books on Genito-Urinary Diseases ..... Cover 1

SPRAGUE & CO.:—
Ernst..... Orthopædic Apparatus Guide 6

WRIGHT & SONS (BRISTOL):—
Medical Annual, 1912 7

MEDICAL LIBRARIES, &c.:—
Baker, Birmingham—
Book Bargains 6
Beasley & Kelley—
Stammering 6
Behnke—
Stammering 6
Davidson & Co.—
Sight Testing for the General Practitioner ..... Cover 1
Matthews Bros.—
Wood: Application of Trusses .. 6

OFFICIAL AND GENERAL ANNOUNCEMENTS

APPOINTMENTS VACANT:—
Agra Dufferin Hospitals and Female Medical School 69
Bedford County Hospital 70
Bootle Borough Hospital 70
Bradford Children's Hospital 72
Brentford Union 69
Bristol Royal Hosp. for Sick Children 69
Bristol Royal Hospital for Sick Children and Women 72
Burnley Union Workhouse 70
Bury Infirmary 70
Cancer Hospital, Fulham-road 68
Charing Cross Hosp. Medical School.. 68
Chester General Infirmary 72
Chorlton-on-Medlock Dispensary 72
City of Liverpool Infectious Diseases Hospital 71
County Council of Cumberland 71
Denbighshire Infirmary, Denbigh 72
Devonshire Hospital, Buxton 68
Dorset County Hospital, Dorchester.. 70
Dundee District Asylum 71
Elder Dempster & Co. 73
Epileptic Colony, Ewell 72
Evelina Hospital for Sick Children .. 71
Guest Hospital, Dudley 68
Herefordshire General Hospital 71
Hospital of St. John & St. Elizabeth, Grove End-road 70
Huddersfield Royal Infirmary 71
Leeds General Infirmary 71
Leeds Tuberculosis Association 71
Leicester Infirmary 69
Lincoln County Hospital 70
London Hospital 72
London Temperance Hospital 71
Loughborough and District General Hospital 70
Macclesfield General Infirmary 68
Manchester Royal Eye Hospital..... 72
Metropolitan Ear, Nose, and Throat Hospital 68
Metropolitan Hospital, Kingsland-rd. 69
Norfolk and Norwich Hospital 72
North Lonsdale Hospital, Barrow-in-Furness 72
Northumberland House, Finsbury-park 71
Putney Hospital 71
Royal Berkshire Hospital, Reading .. 72
Royal Hampshire County Hospital, Winchester 69
Royal Infirmary, Sunderland 71
Royal Sea Bathing Hosp., Margate .. 72
Royal Westminster Ophthalmic Hospital 70
St. Austell Union and Rural District Council 69
St. Bartholomew's Hosp., Rochester.. 69
St. Mary's Hospital for Women and Children, Plaistow 71
Salford Royal Hospital 70
Southampton Union 70
Staffordshire General Infirmary 69
Stockport Infirmary 70
Stoke-on-Trent and Stone Rural Joint Hospital Board 70
Torbay Hospital, Torquay 68
University College Hospital 70
Wakefield General Hospital 70
Westminster Hospital 69
West Suffolk General Hospital, Bury St. Edmunds 71
Wolverhampton and Staffordshire General Hospital 69 70

ASSISTANCIES, MEDICAL..... 72

ASYLUMS, HOMES, &c.:—
Ashwood House, Kingswinford 61
Association of Medical Men Receiving Resident Patients 68
Barnsley Hall, Bromsgrove 61
Barnwood House Hospital 62
Bishopstone House, Bedford 61
Brunton House, Lancaster 68
Buntingford House Retreat, Buntingford 64
Camberwell House, Peckham-road .. 61
Cheadle Royal 61
Clarence Lodge, Clapham-park 62
Colthurst House, Warford 60
Coppice, The, Nottingham 62
Crooksbury Sanatorium, Surrey 65
Dalrymple House, Rickmansworth .. 67
David Lewis Colony, Alderley Edge.. 60
Dinsdale Park, Darlington 62
Dr. Guradze Sanatorium 66
Farnham House, Dublin 63
Ghyllwoods 64
Grove House, Church Stretton 62
Grove, The, Catton, Norwich 62
Haydock Lodge, Newton-le-Willows.. 63
Heigham Hall, Norwich 61
Home for Epileptics, Maghull 60
Home for Invalids, Hornsey 68
Invernith Lodge Sanatorium, Colinsburgh 64
Kingsdown House, Box 61
Lane, Weymouth 68
London Fever Hospital 61
London Open - Air Sanatorium, Wokingham 65
Mailing Place, Kent 62
Malvern Hydropathic 67
Manna Mead, Blackheath 68
Maryville, Dublin 65
Melbourne House, Leicester 68
Meyrick, Harrow Weald 66
Middleton Hall, Co. Durham 61
Moat House, Tamworth 62
Mount Pleasant, Wanstead 61
Newmains Retreat, Lanarkshire 65
Nordrach in Wales Sanatorium 65
Nordrach-on-Dee, Banchory 65
Northlands Retreat, Wandsworth 68
Northumberland House, Finsbury-park 60
Northwoods House, Winterbourne .. 65
Norwood Sanatorium, Ltd. 64
No. 610, L.O., Strand 68
No. 655, L.O., Strand 68
No. 710, L.O., Strand 68
No. 715, L.O., Strand 68
No. 719, L.O., Strand 68
Ocea Island, Heybridge 64
Otto House, West Kensington 60
Painswick Sanatorium 65
Peckham House 63
Plympton House, South Devon 62
Portsmouth Corporation Mental Hospital 62
Ruebury Sanatorium, Northallerton.. 65
St. Andrew's Hospital, Northampton. 62
St. George's Retreat, Burgess Hill .. 61
St. Luke's Hospital, E.C. 61
Sanatorium Clavadel 65
Springfield House Private Asylum, Bedford 62
Stocker, Craven-street 68
Stretton House, Church Stretton 62
The Grange, Rotherham 61
The Pleasaunce, York 62

ASYLUMS—(Continued).
Uplands, Macclesfield 60
Vale of Clwyd Sanatorium 64
Warneford Asylum, Oxford 61
Westcliff Nursing Institution 68
Wiesbaden, 30, Parkstrasse 67
Wye House, Buxton 62
Yarrow Convalescent Home, Broadstairs 63

FINANCIAL, &c.—
Equitable Reversionary Interest Soc. 58

HEALTH RESORTS, BATHS, &c.:—
Badgastein 67
Bad Nauheim 67
Cheltenham Spa 67
Homburg 66
Passugg 66
St. Joachimsthal 67
Smedley's, Matlock 67

HOMES WANTED:—
B. Walton 68

HOTELS:—
Hampden Residential Club 57
Hotel Windsor 67
White Hart Hotel, Margate 65

HOUSE & ESTATE AGENTS:—
Bedford & Co., Wigmore-street 74
Doelcerg, Knightrider-street 74
Dyer, Son, & Hilton, Budge-row 74
Elliott, Son & Boyton, Vere-street .. 74
Ley Clark, Wimpole-street 74
Peacey, Gloucester Gate..... 74
Pennington, Richmond Station 74
Pulley-, Creer & Co., York 74
No. 721, L.O., Strand..... 74
CONSULTING-ROOMS:—
Elliott, Son & Boyton Vere-street .. 74
House keeper, Ebury-street 74
No. 670, L.O., Strand..... 74

LIFE & FIRE ASSURANCES:—
General Life Assurance Co. 58
Lloyd's Special Motor Policy..... 75
Prudential 58

MASSAGE:—
London School of Massage..... 59

MEDICAL ACCOUNTANTS, &c.:—
Dacie 73
Granville 73
Turner..... 73

MEDICAL AGENTS:—
Blundell & Rigby 76
Fleldhall, Limited 77
Manchester Clerical, &c., Association. 76
Manchester Medical Agency 76
Medical Agency 77
Needes, Herbert 77
Needes, J. C. 76
Peacock & Hadley 76
Scholastic, Clerical, &c., Assoc..... 73
Turner..... 78

MEDICAL SCHOOLS:—
(LONDON.)
Charing Cross Hos. Medical School .. 57
London Hospital Medical College.... 58
London Hospital Medical College and Dental School 56
Royal Dental Hospital 56

MEDICAL SCHOOLS—(Continued).
St. Mary's Hospital Medical School.. 56
University College Hospital Medical School 56
West London Post-Graduate College.. 57
(PROVINCIAL, &c.)
Edinburgh University Residential Medical College 58
University of Bristol 56

NURSING INSTITUTES:—
Army and Navy Male Nurses' Co-operation 59
General Nursing Association 59
Hospital for Sick Children, Great Ormond-street 59
Leeds Trained Nurses' Institution 59
London Nurses' Association 60
Male Nurses Temperance Co-operation 60
Mental Nurses' Co-operation 59
National Hospital Male Nurses' Association 59
Nurses Co-operation, Portland-place. 60
Registered Nurses' Society 59
St. John's Hospital 59
St. Luke's Hospital, E.C. 59
Temperance Male Nurses' Co-operation 59
The Retreat, York..... 59

OFFICIAL NOTICES:—
City of London Lying-in Hospital.... 57
King's College 58
London School of Clinical Medicine.. 57
Medical Graduates' College and Polyclinic 56
Plaistow Fever Hospital 75
Oxford Eye Hospital 61
Queen Charlotte's Lying-in Hospital.. 57
Royal Institute of Public Health 56
Royal London Ophthalmic Hospital.. 57
Royal Society of Medicine .... Cover 1
St. John's Hospital for Diseases of the Skin, Leicester-square 57
University of Cambridge 58
University of London 59
University of London, University College 57
West End Hospital for Diseases of Nervous System 58

PARTNERSHIPS & PRACTICES:—
Arnold & Sons, Giltspur-street 74
B. B, Hampton Wick..... 75
1125, Leeds 75
Manchester Clerical, &c., Assn. 73
No. 696, L.O., Strand..... 73
No. 711, L.O., Strand..... 72
No. 715, L.O., Strand..... 75
No. 717, L.O., Strand..... 75
No. 718, L.O., Strand..... 74
No. 723, L.O., Strand..... 75
No. 724, L.O., Strand..... 74
Peacock & Hadley, Craven-street 75
Pitt, Brist l 73
Turner, Adam-street 75

RAILWAY & STEAMSHIP CO.'S
New Zealand Shipping Co..... 59
R.M.S.P.—
Yachting Cruises de Luxe 59

TUTORS & LECTURERS:—
Knight 58
Med. Corres. Coll. 58
No. 448, L.O .. 75
Schnelle 8
Weymouth 58

For Index to Trade and Miscellaneous Advertisements see page 4.

NOTES ON PRODUCTS FOR THE PHYSICIAN'S EMERGENCY BAG

(SEE OPPOSITE PAGE)

TRADE MARK 'ERNUTIN' BRAND PRODUCTS

'ERNUTIN' contains the desirable constituents of Ergot. 'ERNUTIN' is physiologically standardised. 'ERNUTIN,' administered after normal confinements, prevents or arrests hæmorrhage and promptly produces a firm contraction of the uterus.

'ERNUTIN' (Oral) is issued in bottles: 1 fl. oz. and 30 c.c., at 2/0; 4 fl. oz., at 6/0; and 16 fl. oz., at 20/0 per bottle.

'VAPOROLE' 'ERNUTIN,' sterile, in hermetically-sealed containers of min. 10 and 0·6 c.c., in boxes of 6, at 3/0 per box.

TRADE MARK 'VAPOROLE' BRAND PITUITARY (INFUNDIBULAR) EXTRACT

Produces a powerful and lasting rise of blood-pressure; slows and strengthens the heart-beat and increases the secretion of urine. This product also causes powerful contraction of the uterus.

Issued sterile, in hermetically-sealed containers of 1 c.c., in boxes of 6, at 4/0 per box.

TRADE 'EPININE' MARK

(3:4-dihydroxyphenylethylmethylamine)

The synthetic hæmostatic, possesses the characteristic physiological action of the extract of the supra-renal gland, being approximately $\frac{1}{10}$ as active as the supra-renal active principle, according to measurements of their effects on the blood-pressure of the cat.

'EPININE,' 1 in 100, is issued in bottles: 10 c.c., at 1/4, and 25 c.c., at 2/6 per bottle, respectively.

'VAPOROLE' 'EPININE,' 1 in 100, sterile, in hermetically-sealed containers of 1 c.c., in boxes of 10, at 2/6 per box.

TRADE MARK 'WELLCOME' BRAND CHLOROFORM

Specially prepared for anæsthesia. Exceptionally pure and reliable. Issued in hermetically-sealed drop-tubes which are enclosed in wooden sheaths to ensure safe carriage in the practitioner's hand-bag or cycle-case.

Tubes of 30 c.c. (approx. 1 fl. oz.), 8d.; 60 c.c. (approx. 2 fl. oz.), 11d.; ¼ lb., 1/4 per tube. Also supplied in bottles.

TRADE MARK 'TABLOID' BRAND PLEATED COMPRESSED BANDAGES AND DRESSINGS

Economise space in the bag. Superior in quality of materials. Protected from contamination. 'TABLOID' BISMUTH GAUZE is the ideal antiseptic gauze. Unlike iodoform dressings, it can be left *in situ* for several days without becoming offensive.

For list, see Wellcome's Medical Diary

TRADE MARK 'VAPOROLE' BRAND AROMATIC AMMONIA

FOR USE AS "SMELLING SALTS"

An excellent addition to the emergency outfit. A tin of 12 hermetically-sealed products of pungent Aromatic Ammonia is about the size of a vesta box. Patients can carry it in purse or pocket.

Aluminised tins are issued, at 1/6 per tin

BURROUGHS WELLCOME & CO., LONDON
NEW YORK MONTREAL SYDNEY CAPE TOWN MILAN SHANGHAI BUENOS AIRES
London Exhibition Room: 54, WIGMORE STREET, W.
H 1080
COPYRIGHT

HOEFFTCKE'S EXTENSION APPLIANCES.

AMBULATORY TREATMENT OF FRACTURE OF THE LIMBS, TUBERCULOUS AND ARTHRITIC DISEASE OF JOINTS.

By C. A. HOEFFTCKE,
21, Woodstock Street, Oxford Street, London, W.
By Appointment to several Hospitals.

(*Continued from March 30th.*)

As I have several times mentioned my Extension table (see Fig. 1) for taking a plaster cast of a leg, or reducing shortening of a leg, it may be of interest to the surgeons for me to describe it, and to give details of a case for which it was used some three months ago with great success. The upper part of my Extension table is furnished on both sides with a steel frame about 9 inches high. On the top of these frames a piece of canvas is stretched on which the upper part of the body of the patient rests. A belt which goes round the body just under the false ribs is fastened crosswise on to two buckles which are fixed on the upper ends of the frames on each side. When strong extension is needed a cross-bar is fixed on the top of the frame, and a perineal strap which is well padded in the middle can be fastened with one end underneath the steel frame, the other end of it being fastened and tightened in a buckle which is fixed on to the cross-bar on top of the frame. On the end of the table another frame is fixed in which a cross-bar runs in sockets which can be turned around by a handle and made to stop running backwards by means of a ratchet wheel and a pawl. This cross-bar and sockets can be fixed at any height between the level of the table and the top of the frame by means of two thumb screws, and is furnished with two little straps and buckles in which the straps from the two ankle-pieces, which are fixed on the feet of the patient, can be fastened. When the handle is turned the feet are pulled downwards with the belt round the body or perineal strap as fixed point, and in that way any amount of extension can be applied to any joint or overlapping fracture. A steel upright support which is furnished with a soft pad on top, and can be adjusted higher or lower, can be used as an additional support for the pelvis underneath the os sacrum. If a plaster cast of the pelvis and upper part of the thigh has to be taken, this pad must necessarily be so small as not to be in the way and interfere with the plaster cast (see Fig. 1).

When the legs and pelvis are suspended there is no obstruction for the plastering of the legs, and the cast can be cut open and taken off without any hindrance.

When a permanent plaster has to be applied with extension the plaster can be put on and left to dry with the leg extended.

Master S. L. (æt. 7 years). The case illustrated in Figs. 2 and 3 was one of active tubercular hip disease. A Thomas's splint was applied to the hip. When the boy tried to flex his leg to ease the pain in the hip he wriggled away with his pelvis from the iron bar on the inside of the splint, with the result that the leg became abducted in the position seen in Fig. 2 and the knee flexed at an angle of 130 degrees. The head was absorbed and what was left of the neck had made a cavity through the acetabulum into the pelvis. Excision of the hip-joint was advised, but in preference to that my splint was ordered as a last resource. The boy was anæsthetised on 15th Dec., 1911, when on my Extension table, and by means of the ankle straps and additional manipulation from above the knee, the leg was pulled downwards, the abducted position corrected, and the flexion of the knee overcome as far as possible. Although the child was only young considerable force had to be applied. While the leg was held in the corrected position on the Extension table the leg and pelvis, which were first covered with cotton-wool bandages, were put in plaster, and when the plaster was set the boy was removed from the table into bed, the extension being maintained by a 6 lb. weight fastened to the strap of the anklet. This was done at 9.30 at night, and the following morning the child was practically free from pain.

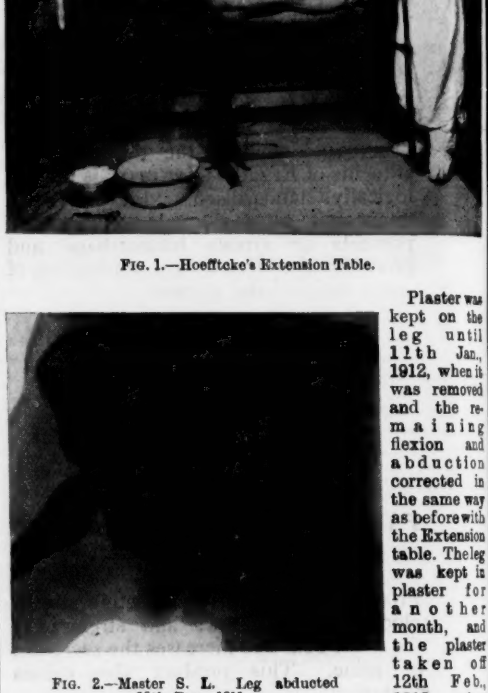


FIG. 1.—Hoefftcke's Extension Table.

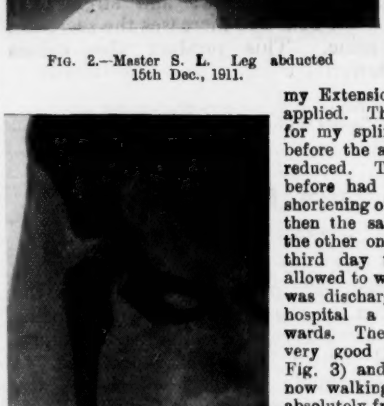


FIG. 2.—Master S. L. Leg abducted 15th Dec., 1911.

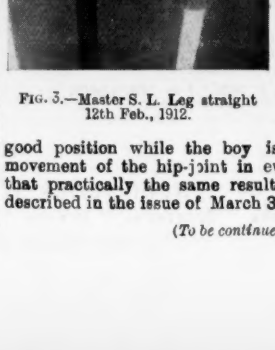


FIG. 3.—Master S. L. Leg straight 12th Feb., 1912.

Plaster was kept on the leg until 11th Jan., 1912, when it was removed and the remaining flexion and abduction corrected in the same way as before with the Extension table. The leg was kept in plaster for another month, and the plaster taken off 12th Feb., 1912, when my Extension splint was applied. The plaster cast for my splint was taken before the abduction was reduced. The leg which before had an apparent shortening of 3 inches was then the same length as the other one, and on the third day the boy was allowed to walk about and was discharged from the hospital a week afterwards. The bones are in very good position (see Fig. 3) and the boy is now walking well. He is absolutely free from pain, and considerably improved in health. I saw him last week, 12th April, and he is walking without the help of a stick. By means of my instrument the bones are held in good position while the boy is walking; there is free movement of the hip-joint in every direction, and I hope that practically the same result will follow as in the case described in the issue of March 30th.

(*To be continued May 25th.*)

Goulstonian Lectures

ON

MODERN VIEWS UPON THE SIGNIFICANCE OF SKIN ERUPTIONS.

Delivered before the Royal College of Physicians of London

BY H. G. ADAMSON, M.D. LOND., F.R.C.P. LOND.,

PHYSICIAN FOR DISEASES OF THE SKIN, ST. BARTHOLOMEW'S HOSPITAL.

LECTURE III.[1]

Delivered on March 19th.

MR. PRESIDENT AND FELLOWS,—In the two previous lectures I showed that many skin eruptions are coming to be regarded as reactions to physical, microbic, or toxic agents which do damage to the tissues. In cannot be said, however, that all skin affections are to be interpreted in this way, and there still remain some which it is convenient to group under the headings of congenital eruptions, new growths, and eruptions of nervous origin.

ERUPTIONS OF NERVOUS ORIGIN.

We have seen already that the part played by the nervous system in the production of skin eruptions is probably less important than was formerly supposed, and that even such eruptions as the erythemas and urticarias, to which the theory of vasomotor nerve disturbance seemed especially applicable, are now believed to be of inflammatory nature and due to the direct action of toxins on the blood-vessels and tissues. It is true that Wolff-Eisner and other leading authorities on the problems of immunity maintain that the phenomena of hypersensitiveness are the result of irritation of the central nervous system, and explain the rashes of serum disease, urticarias from food and drug poisoning, urticaria and pruritus of pregnancy, as also hay fever and asthma and the skin eruptions of pellagra, by the action of heterogeneous albumins upon the vasomotor centres, but I shall not here attempt to discuss the relative merits of these two views, for I have already shown in my last lecture that modern dermatology tends to support that which regards them as inflammatory reactions.

An argument which has been used in favour of the nervous origin of certain eruptions—urticaria, lichen planus, dermatitis herpetiformis, for example—is that they are accompanied by itching, which is obviously due to a nerve disturbance. But itching can often be accounted for just as readily by supposing a local irritation of the sensory nerve terminals in the skin by mechanical or by toxic agents, as by believing it to be due to a central nerve disturbance, and it is reasonable to suppose that the toxic agent which gives rise to the eruption by its action on the vessels and other tissues also irritates the nerve-endings and causes itching.

It is perhaps true that eczematous and pruriginous eruptions are of more frequent occurrence in persons of a neurotic temperament, but it must be remembered that such persons are liable to exaggerate their sufferings and also to aggravate the eruptions by rubbing or scratching. So that while some observers maintain that these eruptions are directly dependent upon nerve disturbance, others regard them as due to a toxæmia which may also be responsible for the nervous symptoms—for the itching itself among others.

Indeed, when we come to make a list of skin affections in which we have clear evidence of nerve origin we find it to be a very small one. There is, of course, herpes zoster; and there are examples of hyperidrosis limited to the areas of distribution of particular nerves; there are a few recorded cases of alopecia following division of a nerve; there is the glossy skin of parts deprived of nerve influence; and Raynaud's disease and some allied affections. The so-called trophic bullæ and ulcers are probably the result of injuries and infections of insensitive parts, and not true nervous lesions. It is possible that we may also include in this list certain vasomotor disturbances, for although vasomotor disturbance probably never alone gives rise to skin eruptions, it cannot be denied that it may have some influence on the course and character of inflammatory eruptions, and that it may also be a factor in determining the seat and distribution of others. I shall presently refer to the possible influence of the nervous system in determining the incidence and distribution of eruptions.

CONGENITAL SKIN AFFECTIONS—NEW GROWTHS.

In regard to the significance of congenital skin affections my remarks will also be brief, for although this subject is one of very great interest, little is known as to the true nature of these complaints. There is indeed a growing tendency to attribute many of these congenital affections to the results of injury or disease during fœtal life, or to the results of infections or of intoxications in the parents, such as syphilis or tuberculosis, and lead-poisoning or alcohol. This would bring these affections into line with other skin eruptions resulting from injury, infection, or toxæmia. But it must be admitted that such evidence is often scanty, and that many congenital defects occurring as family traits, passing from generation to generation, would be difficult to explain in this way.

Of new growths or tumours it may be said that many eruptions which were formerly classed as tumours or new growths are now put among the infective disorders, such as warts and molluscum contagiosum, actinomycosis, keloid; while others, like scleroderma and xanthoma, are possibly of toxic origin. Some new growths belong probably to the group of congenital developmental defects—such as multiple benign epithelioma and adenoma sebaceum. Even rodent ulcer may perhaps be put into this group, bearing as it does a close relationship to multiple benign epithelioma. There remain squamous epithelioma and melanotic epithelioma as examples of true malignant new growths or cancers. The nature of cancer is not a subject to be discussed now, but I may perhaps be permitted to say that the invariable occurrence of precancerous conditions in the form of scars from various causes, and the histological details of these growths as they affect the skin, tend to support the view that malignant epithelioma is not of microbic origin, but that it has to do with a disturbance of the normal balance between the relationship of the epithelium and the connective tissue, so that the epithelial cells grow out of their normal course and invade the connective tissue, becoming, in fact, noxious infecting agents comparable to pathogenic micro-organisms.

THE SIGNIFICANCE OF THE PATTERNS AND DISTRIBUTIONS OF SKIN ERUPTIONS.

I now come to another side of the question of the significance of skin eruptions—namely, to that which concerns their various patterns and their different manners of distribution, and I shall endeavour to show how our present knowledge of microbic infections and of toxæmias helps to make clear the reasons for some of these patterns and distributions, and also how we are able to learn something of the nature and origin of eruptions by the study of their manner of distribution.

THE INFLUENCE OF LOCAL PHYSICAL AGENTS.

An almost obvious reason for the particular distribution of many eruptions is that they are either produced or that their production is assisted by local physical causes. A familiar example is the incidence of *trade eczemas* upon the hands and fingers. This is possibly also the reason for the peculiar mask-like distribution of *eczema* in infants upon an exposed part, the face, and on the convex surfaces of this exposed part—namely, the forehead and cheeks—as seen in the photograph (Fig. 17). The freedom of the nose is probably accounted for by the fact that the skin here is thicker and more freely lubricated with sebaceous secretion. This peculiar mask-like distribution of eczema in babies often helps to distinguish it from impetigo, which does not respect the parts about the mouth and orbits.

A good example of the distribution of an eruption being determined by friction on prominent parts is that of *erythema of the napkin region* in infants. In this affection the child often has a general tendency to nettle-rash of infants (lichen urticatus), and the rash is brought out especially on those parts where the napkin rubs—namely, on the convex surfaces of the buttocks, genitals, thighs, and the calves and heels, the protected flexures and folds being free. This is well seen in the photograph (Fig. 18). The recognition of this simple fact is really of considerable importance, because the

[1] Lectures I. and II. were published in THE LANCET of April 6th (p. 911) and 13th (p. 969), 1912, respectively.

grave error is often made of mistaking these erythemas of the napkin-region in infants for the eruption of *congenital syphilis*, especially as the erythematous patches may develop into flat papules which become ulcerated, leading to punched-out ulcers which so nearly suggest ulcerated papules of syphilis that even a great physician, Trousseau, mistook them for syphilitic ulcers. The photograph of an eruption of congenital syphilis (Fig. 19) shows that, in contrast to the napkin rashes, the flexures are not here respected.

In *lichen simplex chronicus*, or lichenification, we have an eruption the distribution and shape of which, and probably the eruption itself, depend upon rubbing and scratching by the patient. (Fig. 33.) It occurs in persons of a neurotic type, and it consists of one or more large, oval, intensely itchy, infiltrated patches on the sides of the neck, on the forearms or shins, on the inner sides of the thighs, or on the perineum (in association with pruritus ani). These patches have their origin often in some pruritic affection, such as a nettle-rash from food poisoning, or even in the irritation from gnat-bites, and the patient being of a neurotic temperament cannot refrain from scratching. In course of time the rubbing and scratching lead to inflammation and induration of the skin—i.e., to lichenification. The oval shape of the patch and its position, with its long axis in the direction of easiest scratching, bear testimony to its mode of production, and such patches may be kept up for years, unless measures are taken to prevent the continual rubbing.

Very striking examples of the conformation of pattern or shape of the eruption to the areas affected by mechanical agents are those of *dermatitis artefacta*, either where the eruptions are accidentally produced or intentionally by hysterical patients or malingerers. It is not uncommon for a vesicular or bullous eruption to be produced by the continuous application of a strong liniment or an ointment which was intended for embrocation or inunction. The eruption then takes the shape of the cloth upon which the liniment or ointment is applied, and its square or rectangular shape gives the clue to a correct diagnosis of its origin. The photograph (Fig. 25) is an example of such an eruption in which the rectangular shape is well seen.

Much more puzzling eruptions to those not familiar with them are those produced intentionally in some cases of hysteria. These eruptions are manufactured by the patient in various ways—sometimes by the painting on of a caustic or blistering fluid or by the application of a cup or other vessel dipped in some such fluid, or by sticking on squares of blistering paper, the lesions in these cases corresponding to the shape of the instrument used. When the excoriations are produced by painting on some acid or irritant fluid one sometimes sees at one part of the excoriated patch a long projecting streak indicating that the fluid has run down as it was painted on. In other cases the eruption is produced by friction with the finger-tip, so that long oval excoriations result. This photograph (Fig. 23) is a good example of these so-called *neurotic excoriations* produced by rubbing with the finger. Here, again, the odd shapes of these artificial eruptions gives the clue to their correct diagnosis.

In certain eruptions we see the influence of another locally acting physical agent—namely, light, or rather the ultra-violet rays of the spectrum. I have already spoken of *hydroa æstivalis* in my last lecture as an eruption of bullæ and vesicles occurring only on parts exposed to the light.

In *small-pox*, too, we have a striking example of the influence of light and other physical agents on a skin eruption. Ricketts and Byles, in their work on the diagnosis of small-pox, lay particular stress upon this, the effect of local irritation on the distribution of the eruption, showing that the eruption has "a characteristic tendency to shun the most sheltered parts of the cutaneous surface. These are the great flexures of the body." It is also more marked upon the uncovered parts, the face and the hands. They also show how it may be brought out by any local irritation, such as friction by a garter or of a plaster. It is said that the rash of small-pox is much less severe if the patient be kept in red light, and it is, perhaps, exposure to light which makes the eruption most abundant and severe upon the face and hands.

Further examples of the influence of physical agents on the determination of the distribution of skin eruptions might be given, but those I have mentioned will suffice as illustrations of this particular side. I shall now turn to the consideration of some of the ways by which different distributions are brought about in eruptions due to microbic invasion.

FACTORS WHICH DETERMINE THE DISTRIBUTION OF ERUPTIONS OF MICROBIC ORIGIN.

In the first place it is clear that the site of the eruption may often depend upon the facility with which infection takes place in certain positions. Thus, the *primary sore* in syphilis is usually upon the genitals because it is a venereal infection, but it may also occur on other parts from other contacts, as on the lip or cheek, or on the finger of a medical man. *Lupus vulgaris* is common upon the cheek (and commonly occurs in children), probably from kissing by consumptive persons; but it may also occur upon the nose, by extension from the mucous membrane infected by the finger or handkerchief; and it is not uncommon on the knees or buttocks of children from infection while crawling upon the floor.

FIG. 17.

Infantile eczema, showing typical mask-like distribution.

Many parasites or microbes have favourite sites according as the soil and other conditions are favourable for their growth. It is remarkable how particular are these parasites in their choice of residence, so that even different varieties of the same species flourish only upon their own favourite soil. A familiar example is that of the head louse, the body louse, and the pubic louse, each of which occupies only its chosen region. One sees the same thing in *ringworm*. The small-spored ringworm of children will not invade the beard region of a man, nor will it attack the scalp of an adult. Then, again, the groin ringworm grows only in the flexures between the toes or fingers, in the groins and in the axillæ, but nowhere else; and it never, like other ringworms, invades the hairs. Then there is the *acne bacillus*, which is found only in the mouths of the pilo-sebaceous follicles upon the scalp, face, and back, and which does not appear until puberty. When the small-spored ringworm no longer grows on the scalp, the acne bacillus flourishes there. There is possibly some alteration in the sebaceous secretion at puberty which suits the acne bacillus, but not the ringworm fungus.

The *coccic infections*, streptococcal impetigo and staphylococcal impetigo, also have their favourite sites. That of impetigo contagiosum (Figs. 11 and 12, Lecture I.) is the face and hands, which are parts exposed to infection, and also the flexures of all parts of the body (Fig. 10, Lecture I.), while the region of staphylococcic infection is regulated by the position of hairy parts, being common upon the beard region, as in sycosis (Fig. 22).

One may note also that certain shapes and patterns are often produced by the local spread of infections. Sometimes the individual lesions widen out to form rings, as in tinea

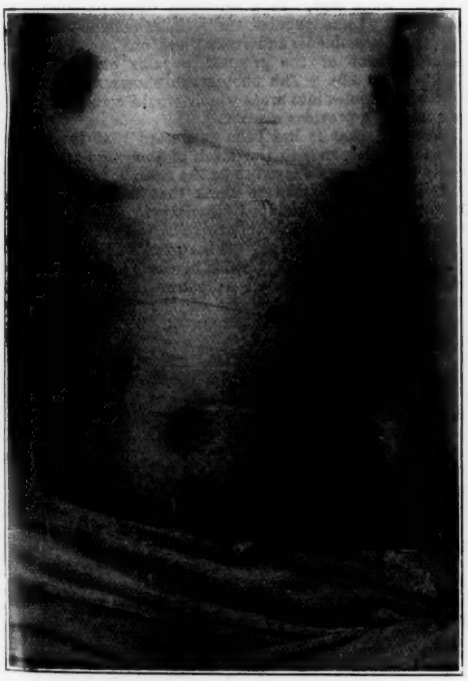
FIG. 18.

Napkin-rash showing eruption on prominent parts and the folds and flexures free.

FIG. 19.

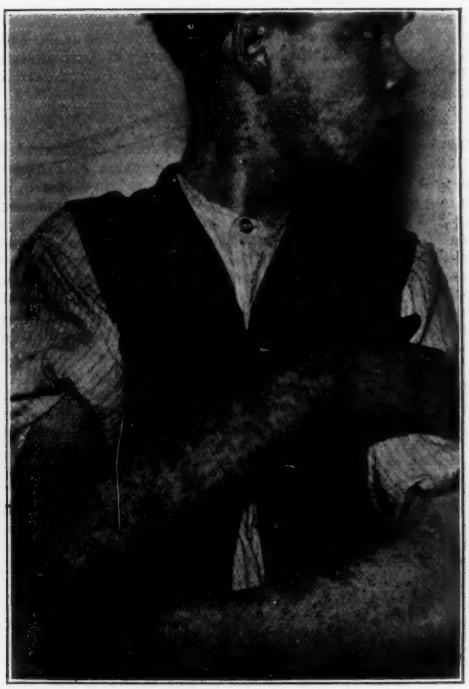
Eruption of congenital syphilis involving both convex surfaces and flexures.

FIG. 20.



Unilateral pigmentary nævus and supernumerary nipple on opposite side.

FIG. 21.



Erythema multiforme showing typical distribution on face and forearms and backs of hands.

circinata and in impetigo circinata. Often fresh infections take place round the original patch or circle to form groups of daughter patches round the mother patch, like satellites round a sun, as seen in ringworm of the scalp and in impetigo of the face.

THE DISTRIBUTION OF ERUPTIONS DETERMINED BY THE COURSE OF THE LYMPHATICS.

Since the lymphatic circulation passes from the periphery to the centre it can never be responsible for the wide distribution of eruptions, but in some local infections of the skin the invading organism is able to pass the barrier of defence set up by the local tissue reaction, and enters the lymphatics. The result of this is seen in the enlarged glands and sometimes inflamed lymphatic trunks of the region draining the site of a streptococcic or staphylococcic infection, of a primary syphilitic sore, of a scrofuloderma, or of a sporotrichial infection. The skin may then become again infected from the glands or lymphatics. The diagram here shown (Fig. 34) illustrates the invasion of the lymphatics in a case of *sporotrichosis*. The infection took place on the thumb and this was followed by a string of inflamed lymphatics and a chain of fresh nodules along the arm.

INFLUENCE OF THE BLOOD-VESSEL DISTRIBUTION IN DETERMINING THE DISTRIBUTION OF ERUPTIONS.

When the micro-organism gains entrance into the blood-vessels general eruptions may arise, as a result of the micro-organisms being carried to all parts of the skin.

A good example of this dissemination of micro-organisms by the blood-vessels is seen in the eruptions of secondary syphilis, in the rose rash of enteric fever, and in some infective erythemas and purpuras. It is not unusual to meet with cases of *multiple lupus* in children due to entrance into the blood stream of tubercle bacilli from some internal focus, often, possibly, a tuberculous gland. These cases nearly always occur after measles, an exanthem which we know often gives rise to dissemination of tuberculosis, and in these cases of multiple lupus the skin is involved rather than the deeper organs.

Probably in many instances widespread eruptions are due to the carrying not of microbes but of toxins to all parts of the skin by means of the blood stream, and there are certain facts in regard to the distribution of the vessels of the skin which have a special interest as affording some explanation of the various patterns of the eruptions due to blood-carried microbes and toxins.

Vascular Network of Renaut.

Some years ago Renaut, a French physician, demonstrated by means of injections of a watery suspension of Prussian blue that the vessels of the skin are arranged in a system of separate territories. Each territory is composed of a vascular cone fed by a small and deep-seated central artery. The bases of the cones are towards the epidermis, so that viewed from the surface of the skin they form a number of rounded areas. These rounded areas Renaut called *areas of maximum circulation*, and he said that they were related to the adjacent areas by a less easily permeable system of anastomoses. This *region of reduced circulation* may be regarded as forming a network of which the areas of maximum circulation represent the meshes. (Fig. 24.)

This network of sluggish circulation can be sometimes very well seen in the living subject in the purplish marbling or mottling known as a *livedo annularis*, which occurs in many children with poor circulations and sometimes in normal persons on exposure of the skin to cold—livedo frigore. (Fig. 24.)

The pattern of the vascular network may sometimes be mapped out by pigmentation as a result of long exposure to heat, the constant dilatation of the blood-vessels and the action of the heat on the tissues leading to the deposit of pigment in the areas of "reduced circulation." This photograph (Fig. 26) is a striking example of this so-called *reticular melanoderma* on the legs of a lad whose work necessitated his standing close to a fierce fire. A similar example of reticular melanoderma, as the result of arsenical poisoning, has recently been reported by Bosellini.

Dr. T. Colcott Fox and Dr. J. M. H. MacLeod have drawn attention to the correspondence of the network of yellowish-red mottling enclosing paler areas which occurs in *parakeratitis variegata*, with the retiform distribution of the venous plexus in the skin as seen in livedo annularis.

Sometimes this same mapping out of the vascular network may be seen in cases of *erythema scrofulosorum* or Bazin's disease. Bazin's disease is one of the affections now known as tuberculides. It occurs on the legs in young girls who stand much at their work, and generally takes the form of indolent nodules which tend to necrose and break down, leaving punched-out ulcers and scars. Histologically it has been shown that the cell-infiltration commences round the veins—probably from the lodgment there either of dead or attenuated tubercle bacilli or from the stasis there of the toxins of tubercle. Sometimes these nodules extend along the veins and mark out the venous plexus in an imperfect network, as is seen in the photograph here shown. (Fig. 27.)

Pattern of Erythemas Determined by the Vascular Network.

The relationship of the pattern of various erythemas in regard to the blood-vessel arrangement is also interesting. It has been suggested by Bonnet and others that the red macules of a *syphilitic roseola*, for example, correspond to the central arterial part of this blood-vessel system, and, as Finger has graphically put it, the arterial roseola and the venous livedo annularis are like the negative and the positive of a photograph. Here is a photograph (Fig. 29) which seems to show this. It is a roseola syphilitica and shows very well the regularly spaced and almost uniformly sized macules which might well correspond to the meshes of the network—to the bases of the vascular cones of Renaut.

This same idea would also explain the white areas on a dark background which are characteristic of *leucoderma syphiliticum*, for it is well known that the leucodermic areas are left behind by the fading of the macules of a syphilitic roseola when it occurs on the pigmented skin of the neck, thus leaving a pigmented network with pale meshes.

The peculiar grouping of small follicular papules in the small follicular syphilide or *lichen syphiliticus* is to be accounted for in the same way. In a syphilitic roseola there can be seen generally some macules, the follicles included in which are red and prominent, and from these one can often trace the development of the grouped papules of a follicular syphilide (Fig. 28). The photograph shows the grouping of follicular papules into areas which would correspond with the macules of a previous roseola.

I have said that it has been suggested that the roseola syphilitica corresponds to the mesh of the vascular system, and this I have long believed to be the case, but from further observation I am inclined to think that it really begins in the network or area of reduced circulation. That is to say, that the spirochætæ settle where there is stasis rather than in the area of active circulation. This agrees with the fact that the mottling of a roseola syphilitica becomes more marked on exposure to cold, or on tying a ligature round a limb. It does not alter the explanation of the grouping of the follicular papules by their origin on an erythematous base.

We see the same grouping of follicular papules in *lichen scrofulosorum*, but the patches are usually large, covering several vascular systems. An imitation of a patch of lichen scrofulosorum may sometimes be produced by the injection of old tuberculin into the skin in a tuberculous patient. There results a cuti-reaction in the form of a large, erythematous patch, over which there may develop follicular papules, as in lichen scrofulosorum or in lichen syphiliticus.

It is probable, too, that the distribution and pattern of *macular atrophy* may be dependent upon the same circumstances, for the macules are known to be preceded by erythematous patches. In *measles* and in *copaiba rash* the same spacing of circumscribed macules may be seen as in syphilitic roseola, and good examples are to be found in the Jacobi-Pringle atlas.

THE INFLUENCE OF THE NERVOUS SYSTEM UPON THE DISTRIBUTION OF SKIN ERUPTIONS.

Herpes zoster is, of course, the most striking example of the relationship of a skin eruption to nerve lesions. It is

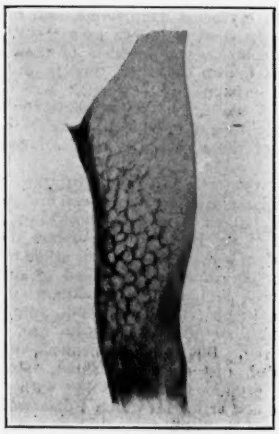
FIG. 22.

Sycosis—a staphylococcic infection of a hairy region.

FIG. 23.

Neurotic excoriations produced by friction with the finger.

FIG. 24.

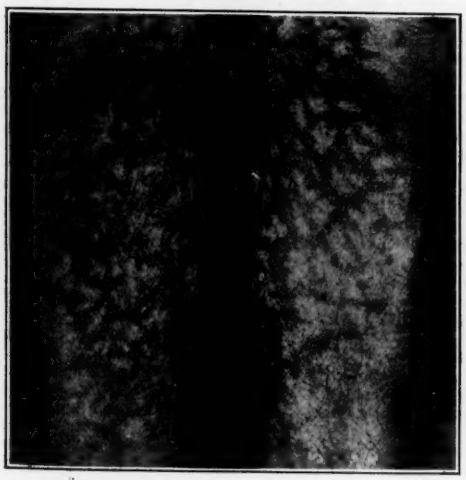


Livedo annularis—an exaggeration of the normal vascular network.

FIG. 25.

Dermatitis artefacta, the result of the application of a local irritant applied on a rectangular piece of rag.

FIG. 26.



Pigmentation associated with erythema ab igne, mapping out the vascular network.

FIG. 27.

Bazin's disease involving the vascular network.

known that the distribution of the eruption of herpes zoster corresponds to an inflammatory hæmorrhage into one or more posterior root ganglia (Figs. 30 and 31), but the manner in which the eruption is brought about and whether it actually depends on nerve influences is still unexplained.

Other examples are alopecia following section of a nerve, of which a few instances have been recorded, and hyperidrosis limited to an area corresponding to that of a particular nerve distribution, generally a division of the fifth cranial nerve. Sometimes (as in the example shown—Fig. 32) scleroderma occupies the area of the supra-orbital nerve, suggesting a nervous origin. But in the large majority of cases of scleroderma no such distribution can be made out. An interesting suggestion has recently been made by Staff-Surgeon J. P. H. Greenhalgh, R.N., that the area of distribution of the rash of typhoid fever corresponds to Head's zone for intestinal disorders, and that the eruption takes this distribution because the typhoid bacilli are apt to stagnate in the vessels here on account of retardation of circulation by reflex vaso-dilatation.

In this connexion mention must be made of the well-known views of Mr. Lenthal Cheatle. Cheatle's observations are based upon the knowledge of Head's zones, Head's zones being definite areas of cutaneous tenderness, which are associated with disease of particular viscera, and which correspond to the areas of distribution of the peripheral nerves in the skin. Mr. Cheatle, from the observation of the seat of origin of a large number of *rodent ulcers* and of *epitheliomata*, came to the conclusion that the point of origin or incidence of these diseases corresponds to the maximum points of Head's areas, or, in other words, to the points at which the peripheral nerves become cutaneous; and he also believes that the spread of these diseases bears a causal relationship to Head's zones—that is, to the areas of distribution and influence of the cutaneous nerves. If I understand him rightly he supposes that peripheral irritation over a long period produces profound changes in the corresponding nerve centres, and that the area of skin supplied by these centres is then influenced by the altered nerve impulses, and since the maximum point would receive and convey most impulses it is natural that the incidence of the disease should be at this maximum point.

More recently Mr. Cheatle has extended his idea to embrace leucoderma and scleroderma, and latterly also some inflammatory eruptions, such as lupus and syphilis, believing that he sees in the distribution of these eruptions evidence of origin at the maximum points of Head and of limitation of spread to Head's zones, and suggesting that neurotrophic and neurovascular influences determine this point of incidence and this area of spread.

Mr. Cheatle's numerous photographs and drawings seem to lend some support to this ingenious idea, but they are not to my mind a convincing argument, firstly because the diseased areas depicted do not always correspond closely to the areas of nerve-distribution, and secondly because if one takes a sufficiently large number of examples of any eruption it is possible to make some of them fit more or less closely into these nerve-distribution areas, while, on the other hand, it is still more easy to find numerous examples in which the eruptions do not in any way correspond to such areas. Indeed, I think that with the exception of the two or three well-known examples that I have mentioned there is little evidence that the distribution of eruptions is influenced by the nerve-supply.

INFLUENCE OF THE VASOMOTOR APPARATUS UPON THE DISTRIBUTION OF ERUPTIONS.

We are ignorant of the exact manner of distribution of the vasomotor nerves, but we know that certain regions are more liable to vasomotor disturbance than others. The flush patches of the cheeks and the reddening of the ears seen in blushing; the flushing of the nose in dyspepsia; the susceptibility of the nose, ears, and extremities to changes of temperature, seem to mark out these parts as regions in which the vasomotor function is easily disturbed.

There is no evidence that vasomotor disturbances can alone give rise to inflammation, but it is known that they may modify the intensity and the course of this process; and in this way it is easy to comprehend how vasomotor disturbances may act as a determining cause for the particular distribution of some eruptions. In *acne rosacea* we have an affection which is characterised by flushings of the central parts of the face which appear to be of a vasomotor reflex nature, and it is possible that the inflammatory conditions which often develop are the result of secondary infection by the micro-organisms of the skin in tissues of lowered vitality.

Lupus erythematosus and *erythema multiforme* are eruptions which affect particularly those parts where vasomotor disturbance most readily occurs, and it seems certain that the vasomotor apparatus must have some influence in determining this distribution. The characteristic distribution of lupus erythematosus upon the flush patches of the cheeks and the nose is well known. This distribution on the flush patch areas is sometimes likened to the triangular patches on the face of a clown, and the clown's patches are said to take their origin from an attempt to exaggerate the flush of health which the actress tries to reproduce.

The common distribution of *erythema multiforme* is seen in the next photograph (Fig. 21), in which there are erythematous patches on the sides of the face and on the forearms. In many eruptions supposed to be of toxic origin, notably in lupus erythematosus, in erythema multiforme, and in the toxi-tuberculides, there is what is known as a "chilblain circulation"—that is, a coldness and blueness of the hands and feet. It is not known whether this is due to a vasomotor nerve disturbance or to direct action of a toxin upon the vessel walls, but it seems likely that this vaso-dilatation of chilblain circulation may help to determine the position of these eruptions on the face and extremities

Although the modern tendency is to discount the vasomotor factor in the production of erythemas and urticarias, there are a few affections which it seems almost impossible to regard otherwise than as being of vaso-motor nerve origin. Such are *Raynaud's disease* and some allied minor affections. A feature of Raynaud's disease, and of similar but less severe conditions which occur sometimes on the fingers in middle-aged women, is that vaso-dilatation is preceded by contraction, so that the parts are first white and then dusky red. But these phenomena, which are certainly vasomotor disturbances, cannot, strictly speaking, be called eruptions comparable with the inflammatory erythemas and urticarias which I discussed in my last lecture.

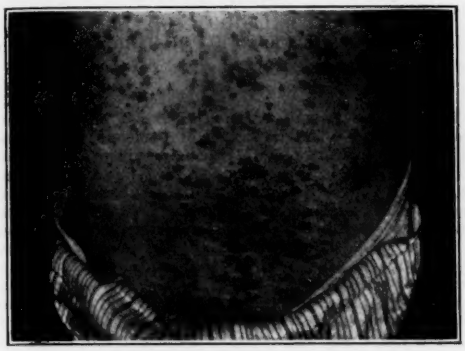
THE DISTRIBUTION OF SOME CONGENITAL SKIN AFFECTIONS.

There is just one other question concerning the distribution of skin eruptions of which I wish to say something—namely, that which concerns the unilateral linear or systematised nævi. These nævi are commonly due to an irregular overgrowth of the horny epidermis which produces a warty prominence generally of a linear form—*verrucose linear nævus*. But these nævi may also be made up of one of the other elements of the skin—sebaceous glands, hair follicles, sweat glands, pigment, or blood-vessels—and they may occupy whole territories on one side of the body instead of being merely in streaks or lines. The photograph here shown (Fig. 20) is an example of such a nævus made up of pigmented patches scattered over a limited area on one side of the body. It will be noticed that this case also shows a supernumerary nipple on the right side.

Because these nævi have some appearance of occupying areas of nerve distribution like herpes, a theory has been propounded that they are due to some injury to the spinal cord during fœtal life owing to mild infections or toxæmias in the mother. But a closer study of the distribution of these nævi has shown that they seldom, if ever, correspond accurately with areas of nerve distribution.

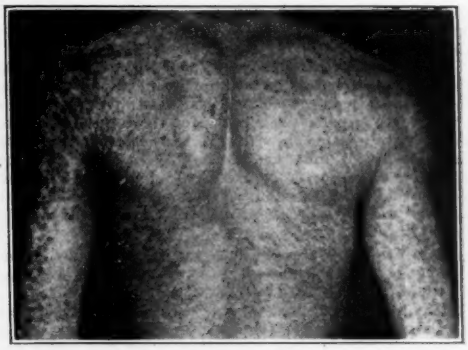
Another hypothesis has been suggested by Blaschko and by Brinaud—namely, that these nævi result from developmental defects of certain parts of the skin and that they are altogether independent of nerve influence, in that they are initiated before the nerves themselves are developed. According to this view the shapes of the nævi are explained by their occupation of the primitive metameric divisions of the skin, which do not necessarily correspond with later areas of nerve distribution. They are seen most often on the

FIG. 28.



Small follicular syphilide. Groups of papules corresponding to macules of roseola.

FIG. 29.



Roseo'a of syphilis, showing macules corresponding to meshes of vascular network (best seen on arms).

FIG. 30.

Herpes in the region of the first division of the fifth cranial nerve—herpes frontalis.

FIG. 31.

Herpes of the arm in the area supplied by brachial plexus.

FIG. 32.

Scleroderma in region of supra-orbital nerve.

FIG. 34.

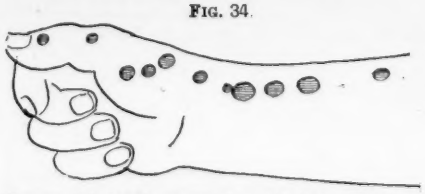
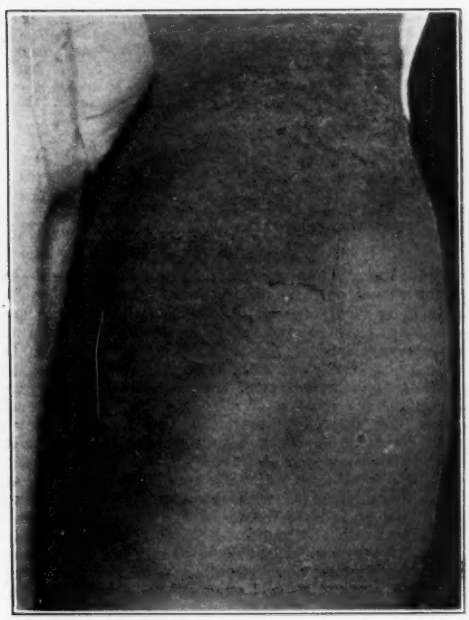


Diagram of lesions in a case of sporotrichosis. The shaded circles indicate position of the nodules and small abscesses, the original lesion being on the thumb.

FIG. 33.



Lichenification on the inner side of the thigh.

frontiers of two metameric segments or dermatomes—i.e., upon Voigt's lines; and most frequently of all where two dermatomes, originally widely separated, become joined together during the growth of the embryo, as upon the limbs.

But although this theory might account for the linear forms, it could hardly be said to explain those which occupy large broad areas or sections, and in reality the reason not only of the peculiar distribution of these nævi but also of their nature remains obscure. Perhaps it may be said that the presence of other deformities, such as supernumerary nipples and absence of or excessive number of digits, seems to put them into the class of developmental defects rather than into that of lesions resulting from toxic or inflammatory causes.

This, Mr. President and Gentlemen, concludes my lectures. It has been my endeavour to place before you some of the modern ideas in regard to the significance of skin eruptions. I hope that I have at least succeeded in showing that dermatology presents many problems of interest. It is true that skin affections seem often to bear little relation to diseases of internal organs; but this is explained by the circumstance that hurtful agencies which give rise to disease often confine their attacks to one organ, and that when the skin is that organ there is generally no disturbance of a vital function, so that general symptoms are not produced. It is, in fact, not so much by its clinical side as by the common bond of pathology that dermatology is united to general medicine.

BRIGHTON AND SCHOOL MEDICAL INSPECTION.—Since the operation of that portion of the Education Act of 1907 which imposes upon every local authority the duty of providing for the medical inspection of elementary school children an excellent work has been done in Brighton, and several articles have appeared in these columns appreciative of the splendid efforts that are being made to improve the physique of the rising generation and also of the working and the results derived from the operations of the school canteens. Two causes, however, have necessitated an alteration of the existing arrangements. In the first place the hospitals declined to receive children from the elementary schools for whose medical treatment the education committee is able to draw upon the rates. And then came the regretted resignation of Dr. J. Lambert, the first school medical officer for Brighton. The education committee has now propounded two schemes of equal cost, which may be summarised thus:—

A Scheme.

	Per annum.
5 local practitioners at £50	£250
1 whole-time officer	450
Additional nurse, use of hospital theatre, occasional admission to hospital	120
	£820

B Scheme.

1 whole-time officer	£450
1 second officer	200
1 surgeon	50
Additional nurse, use of hospital theatre, occasional admission to hospital	120
	£820

The education committee desire to appoint a medical officer for educational purposes, whose whole time would be given partly in medical inspection and partly in medical treatment, and that as the work of inspection alone (the elementary school population is in round figures 20,000) required the services of more than one medical man, they propose to appoint a second medical man, together with a surgeon for the removal of adenoids and enlarged tonsils. It was not surprising, therefore, that at a meeting on March 26th the education committee should have adopted the B Scheme, except so far as the salary of the senior officer, which was fixed at £400, rising by increments of £50 to £500. In connexion with the appointment of a second medical officer, it is stated to be the intention to make an arrangement with the sanitary department where assistance is needed for part of his services. Brighton is now a very large town, but we doubt whether the local practitioners will consider that this development of the whole-time officer is wise or fair.

MOSQUITOES AND RIVER VESSELS.

BY ANDREW BALFOUR, M.D., B.SC. EDIN., F.R.C.P. EDIN., D.P.H. CAMB.,

MEDICAL OFFICER OF HEALTH, KHARTOUM.

THERE is one passage in Mr. E. H. Ross's interesting and useful book on "The Reduction of Domestic Mosquitoes" which seems to me to require, if not an explanation, at least a qualification. It is that which reads: "An occasional mosquito is conveyed by train and ships, but the numbers never seriously affect a cleared district." I take it that when Mr. Ross wrote this sentence he was referring only to sea-going vessels. My experience at Khartoum has shown, beyond all doubt, that it is not true as regards steamers and boats plying on the Nile. Indeed, unless constant attention were paid to these vessels, all the work carried out in the town would speedily be undone, while even as it is we are still every now and then invaded by numbers of stegomyia fasciata and culex fatigans bred out in the bilge or elsewhere on board steamers and boats. Further, not a year passes but that cases of locally acquired malaria are traced, more or less definitely, to infected anophelines brought into the town precincts by river vessels. I have dealt with this subject on several occasions,[1] but as it is of great interest and importance, and as one is now in a position to present some statistics regarding it and to outline a scheme devised for its prevention, it seems advisable again to refer to it. On going through my statistics for the last sanitary year, that ending Sept. 30th, 1911, it was apparent that, though Khartoum North is a much smaller place than Khartoum, and, albeit scattered, contains many less water collections wherein mosquitoes can breed, it compared unfavourably with Khartoum as regards the number of culex and stegomyia breeding in it. A brief consideration of the attached tables will confirm this statement. In my medical officer of health's report for 1910–11 I have attributed this to three factors: (1) more thorough and extensive inspection resulting in more breeding places being discovered; (2) greater risk of infection from boats and steamers, which, though they may be free from larvæ and pupæ, may yet bring in adult mosquitoes, and which are much more numerous on the north bank of the river; and (3) the scattered nature of the area under control.

Of these, I believe No. 2 to be the most important. The dockyards are situated at Khartoum North, and most of the native boats unload there. At the same time, a steamer passing up the river can readily, so to speak, shed mosquitoes, especially stegomyia, *en route*, and thus it is that on the Khartoum side, where steamers do tie up opposite the post office and at other points, we find repeated infections of zeers and other water receptacles, such infections being usually almost wholly confined to houses near the river bank. Were it not that constant inspection work is going on, this infection would speedily spread, and we would soon have mosquitoes all over the place. In this connexion one may note that our more recent statistics will be a little more elaborate and useful, for we are now stating whether eggs, larvæ, pupæ, or empty pupal cases were found, which is certain to give us a better idea as to how matters stand in the mosquito world, both in Khartoum and in Khartoum North. In the great majority of the infections stated in the accompanying tables young larvæ only were present.

Anyone studying the tables may, however, ask why, if the above statements are true, do we find more than twice as many stegomyia infections in Khartoum than in Khartoum North, even granting the latter does not present so large a field for mosquito breeding operations. The explanation is interesting. Take the Khartoum table. It will be seen that the total stegomyia figure (71 infections) is largely made up (40 infections) of cases where zeers and other small water receptacles were infected during two months of the year—i.e., October and November, 1910. Now inquiry shows that a great number of these infections occurred upon premises in Khartoum which happen to be situated opposite the dockyards. The north wind had begun to blow, and, as has frequently been found on other occasions, stegomyia were

[1] Mosquitoes in Steamers (August 15th, 1903), Journal of Tropical Medicine, vol. v., p. 253; Mosquitoes with reference to Immigration and Horse Sickness, THE LANCET, Jan. 8th, 1910, p. 100.

blown across the river from infected steamers and sought a lodgment in the above-mentioned premises. A glance at Plans 1 and 2 will make this clear, and it will be seen that it is true both as regards the large and the small dockyard, the latter being situated further up the Blue Nile and visited by comparatively few steamers and native boats.

One has spoken about the introduction of uninfected or infected anophelines by the agency of river vessels. There has recently been, so far as can be told, an interesting and unfortunate example of this occurrence. At a time when no anopheline larvæ were to be found anywhere in the vicinity a loaded barge having a deck cargo of wood tied up opposite the British Barracks on Nov. 29th, 1911. Owing to the deck cargo it was impossible to make a proper inspection of the barge. As it was the Bairam holiday the barge lay unloaded, and on Dec. 6th larvæ of pyretophorus costalis about four days old were found in a river pool close to it. On Dec. 19th three cases of quartan malaria occurred in the British barracks, two certainly primary, one supposed to be a relapse, and thereafter up to Jan. 7th, 1912, other cases occurred, one in the Gordon College, the others at Said Pasha Barracks, there being ten cases in all. Now it is an interesting fact that all these buildings were in the direct "wind line" of the barge. At no time, save as recorded above, were anopheline larvæ found, and it is probable that a few infected imagines, which are believed to be capable of surviving and transmitting infection for about two months, were responsible for the small outbreak. At the same time, it is worthy of note that, though the British barracks cases and the single Gordon College case were quartan infection, the six amongst Egyptian soldiers at Said Pasha Barracks were benign tertian. This, however, does not of necessity disprove the argument advanced. No adult mosquitoes were observed. I was absent in Cairo at the time, otherwise I would have arranged for traps to be placed in the rooms where the cases occurred and this might have led to their

TABLE I.—*Khartoum. Mosquito Statistics for the Year ending Sept. 30th, 1911.*

Month.	Number of wells, pits, &c., infected.			Number of zeers and other small receptacles infected.			Number of boats and steamers infected.			Number of pools infected.			Total.			Number of permanent collections in the city.	Percentage of infected permanent collections.
	C.	S.	A.	C.	S.	A.	C.	S.	A.	C.	S.	A.	C.	S.	A.		
1910																	
October	42	0	7	0	18	0	1	1	2	0	—	5	43	19	14	1203	4·0
November ...	30	1	0	2	22	1	1	0	0	0	—	9	33	23	10	1202	2·5
December ...	27	1	0	1	0	0	0	1	0	2	—	3	30	2	3	1202	2·3
1911.																	
January	30	2	0	4	4	0	1	0	0	0	—	15	35	6	15	1197	2·6
February	32	0	0	1	2	0	1	0	0	1	—	1	35	2	1	1091	2·9
March	34	1	0	0	1	0	0	0	0	1	—	1	35	2	1	1083	3·2
April	29	1	0	1	2	0	2	0	0	0	—	1	32	3	1	1056	2·8
May	24	0	1	0	4	0	1	2	0	0	—	1	25	6	2	1053	2·3
June	26	0	1	0	1	0	0	0	0	4	—	4	30	1	5	1032	2·6
July	22	0	0	1	2	0	2	0	0	2	—	0	27	2	0	1006	2·1
August	35	0	0	2	2	0	3	0	0	4	—	0	44	2	0	971	3·6
September ...	20	0	1	1	3	0	1	0	0	2	—	6	24	3	7	950	2·2
Totals	351	6	10	13	61	1	13	4	2	16	—	46	393	71	59	—	2·7

Note.—The diminution in the number of permanent water collections is chiefly due to the filling up of shallow wells, rendered possible by the introduction of a pure and piped water-supply to a considerable portion of Khartoum. Khartoum North has still to depend on its shallow wells and the Blue Nile.

TABLE II.—*Khartoum North. Mosquito Statistics for the Year ending Sept. 30th, 1911.*

Month.	Number of wells, pits, &c.			Number of zeers and other small receptacles.			Number of boats and steamers.			Number of pools.			Farm at east side of town.			Other cultivated lands.			Total.			Number of permanent collections.	Percentage of permanent collections infected.
	C.	S.	A.	C.	S.	A.	C.	S.	A.	C.	S.	A.	C.	S.	A.	C.	S.	A.	C.	S.	A.		
1910.																							
October	11	—	2	—	0	—	1	1	—	0	—	0	22	—	70	1	—	2	35	1	74	215	4·65
November ...	33	—	0	—	0	—	2	5	—	0	—	0	4	—	10	0	—	0	39	5	10	216	14·80
December... ...	21	—	0	—	2	—	1	3	—	0	—	1	4	—	1	0	—	0	26	5	2	216	8·33
1911.																							
January	24	—	0	—	2	—	5	2	—	1	—	6	0	—	0	0	—	0	30	4	6	217	10·14
February	24	—	0	—	1	—	0	0	—	2	—	1	0	—	0	0	—	0	26	1	1	218	10·55
March	24	—	0	—	1	—	0	1	—	2	—	1	0	—	0	0	—	0	26	2	1	218	10·55
April	11	—	0	—	0	—	0	1	—	1	—	2	0	—	0	0	—	0	12	1	2	218	5·45
May	20	—	0	—	1	—	0	0	—	0	—	0	0	—	0	0	—	0	20	1	0	220	9·09
June	14	—	0	—	1	—	1	0	—	0	—	1	0	—	0	0	—	0	15	1	1	220	6·36
July	21	—	0	—	4	—	0	0	—	0	—	1	5	—	2	0	—	0	26	4	3	220	9·54
August	20	—	1	—	4	—	0	0	—	0	—	0	6	—	3	0	—	0	26	4	4	220	9·54
September ...	28	—	0	—	0	—	1	1	—	0	—	0	7	—	3	0	—	0	36	1	3	220	14·09
Totals... ...	251	—	3	—	16	—	11	14	—	6	—	13	48	—	89	1	—	2	317	30	107	—	9·70

C. = Culex; S. = Stegomyia; A. = Anophelines.

discovery. Although absolute proof is lacking, I think there can be little doubt that in this instance the barge was to blame, especially as every now and then we have found anopheline larvæ on board such craft. None, however, were found in the bilge of the barge in question after it had been unloaded, while inquiries failed to elicit the name or number of the steamer which had towed the barge to the landing place.

One [2] has described fully the regulations which were drawn up for the purpose of suppressing mosquitoes in steamers. Provided these are properly carried out, and this presents no great difficulty, there is no reason why any steamer should enter the precincts of the town harbouring either the water stages or the imagines. It may perhaps be well in an article of this kind again to tabulate these regulations. They are as follows:—

1. Before leaving Khartoum the bilge water in the various sections should be oiled by pouring petroleum on the surface of the water and stirring well with a stick. A film will then form on the surface which prevents access of air to the mosquito larvæ and pupæ and so kills them. Eggs deposited by mosquitoes on this oil film will not develop, and many of the females themselves will be killed. Roughly, about one half pint of oil should be devoted to each section. A little experience soon shows how much or how little oil is needed to form a proper film. In addition, the water in the trays under the boilers should be examined, and if necessary oiled. (This note was added because anophelines were found breeding in such water.)

A cup or wide-mouthed bottle can be used for collecting water for examination. The vessel should be quickly but gently dipped under the surface and lifted out without spilling any of the contents. For somewhat inaccessible places a tin with its bottom replaced by wire gauze mesh and attached to a stick is useful. The larvæ are then found wriggling on the gauze. Such a collecting dish is easily made and answers well. It should be examined in a good light. It is to be remembered that any standing water collections will harbour mosquito larvæ, and attention should therefore be paid to the water-closet cisterns, zeers, and tanks.

2. During the voyage, opportunity should be taken to re-oil the bilges wherever possible. This should especially be the case before starting on the return journey. Wood holds are usually at fault. The difficulty can be got over by emptying these in rotation, so that the water in the hold can be got at and oiled once in every fortnight. Special attention should be directed to zeers when these are used for storing bottles of drink. All zeers should be emptied out at least once a week during the voyage.

3. The thing to be avoided is returning to Khartoum with mosquitoes on board. If this is done, wells and water collections in the town which have been cleared at trouble and expense are liable to become re-infected. This has happened repeatedly, so that it is very important that steamers should arrive clean and free. It is well to have all bilge water emptied on arrival, and all steamers lying up should be inspected and treated in the manner described. Similar precautions are required as regards barges, sandals, launches, and any vessel on which there is stagnant water.

Note.—It has been proved that mosquitoes, as a rule, will not stay for any length of time on a steamer if they are prevented from breeding out on board. Consequently such preventive methods are effective as has been demonstrated on several occasions, and there is no excuse in most instances for steamers reaching Khartoum with their bilge water, &c., full of larvæ and pupæ and their cabins full of adult mosquitoes.

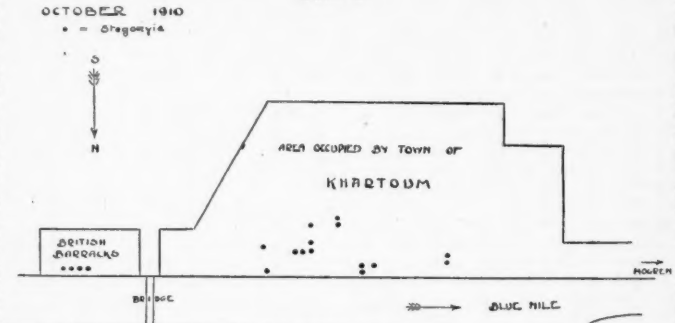
[2] Third Report (1908) Wellcome Tropical Research Laboratories.

Some engineers faithfully carry out these instructions and bring in their steamers entirely free, but it has been found that a certain number pay little or no attention to them during a voyage. On nearing Khartoum, fearing to be fined, they take care to empty out all bilge and other stagnant water and tie up with their vessels free of eggs, larvæ, and pupæ, but often full of adult mosquitoes. If taxed with neglect they declare that these imagines had come on board at wood stations or ports of call. Now while one knows very well that such is not the case, it is another thing to prove it before a police magistrate, as naturally such invasions can and do occur, albeit they are neither common nor, as experience has shown, persistent—i.e., mosquitoes thus casually boarding a vessel rarely stay on board. It is the egg layer in the bilge which constitutes itself a true passenger, and indeed well-nigh a member of the crew.

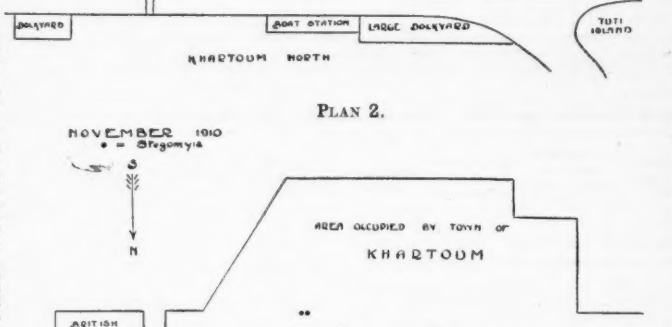
Those in charge of native boats also follow the methods of slack and careless steamer engineers and reises, while barges, loaded as they often are with wood or grass, form a special nuisance.

As matters have recently been getting worse instead of better it was imperative to devise a new method of checking this nuisance and danger to health. Accordingly it has been decided to establish a small quarantine station on the southern bank of the Blue Nile well below the town and some little distance from any human habitation. It will consist of a room for the inspector on duty, a store, and, as special features, a trap pool and a number of uncovered zeers containing water. In future all steamers and boats, whether coming from the White Nile, the Blue Nile, or the main Nile, save those plying locally, will be required to tie up opposite this station before calling at any point on either bank within the precincts of the town. An inspector will be on duty day and night and, if required, the vessel will be cleared both of water stages and imagines, and then, and then only, allowed to proceed. Whoever is in charge will be given a clearance ticket. The object of the pool and the open zeers is to trap adults driven ashore. These will naturally make for the nearest water, and their broods can be readily destroyed. Apart from anything else, this scheme may prove helpful by enabling us to discover other species, apart from C. fatigans, S. fasciata, and P. costalis, which may be brought into the town. We have evidence that in the past a Mucidus, a Nysorhynchus, and a Chrysoconops have been introduced by river vessels, and we may find other stray birds of passage. The scheme, which presents some other features not requiring notice here, will cost very little and should prove effective, while it seems to be the only method that will serve. Personally I believe it will drive engineers and others to carry out the old regulations in an efficient manner and that, ere long, the new quarantine restrictions will prove

PLAN 1.



PLAN 2.



Plans showing influence of north wind on stegomyia infections.

unnecessary, at least for so long as may suffice for certain incorrigibles to forget that they existed. Then they will doubtless have to be put in force again, and I doubt not with marked benefit to the community at large.

Khartoum.

ON RADIUM EMANATION IN MINERAL WATERS.[1]

BY T. PAGAN LOWE, M.R.C.S. ENG., L.R.C.P. EDIN.,
SURGEON TO THE ROYAL MINERAL WATER HOSPITAL, BATH.

THE year 1903 was an important one in the history of balneology, for then it was that Ramsay and Soddy demonstrated that helium was one of the products of the disintegration of radium. In the same year Professor R. J. Strutt discovered radium in the deposit of the Bath waters. In the same year again the late Lord Blythswood published in *Nature* the fact of the radio-activity of the gases from the springs of Bath.

In his presidential address to this section in October, 1909,[2] my friend Dr. Leonard Williams attempted to redress the balance between science and empiricism, which in matters balneological and climatological had, in his judgment, too long shown a bias in favour of the latter. The burden of his argument, as it seems to me on reading that address, was that the methods which we employ exercise an influence upon the internal secretory glands, and he brought a considerable mass of evidence in support of his theory. He did not, however, offer any explanation as to how and by what means these internal secretory glands were influenced by such methods. I think the time has come when we can afford to venture a step further by suggesting that the means by which our results are produced are in some cases, at any rate, brought about by radio-activity.

In his recent report to the Bath corporation on the subject of the radio-activity of the waters, Sir William Ramsay prefaced his remarks on the purely local aspect of the matter by a little explanation of the present position of our knowledge of radium. I feel sure that a good many members of this section must be in a similar state of ignorance to that in which I unfortunately found myself, so I make no excuse for prefacing what I have to say by quoting briefly from Professor Ramsay's report. Radium is a very unstable element, continually changing into another body, also elementary. During this change it parts with helium, each atom of radium furnishing one atom of helium. Having shot out its particle of helium, the atom radium, Sir William Ramsay tells us, is no longer radium, but a gas to which he has given the name of niton, but which was first known by the cumbrous name of radium emanation. The potency of radium depends upon its niton. There is not time to go into the life-history of niton, but I would refer those interested in the subject to the very clear account given by Sir William Ramsay in his "Report on the Mineral Water of Bath," copies of which I am able, by the courtesy of the corporation of Bath, to distribute to-night. Suffice it to say that what is called the "half-period" of decay for niton is about four days, so that practically in about a month it is all changed. As its metamorphosis proceeds niton gives off certain solids named radium A, B, C, D, &c., and during the change of radium into niton B rays are evolved, and it is these which are used for therapeutical purposes.

While alpha rays—that is, atoms of helium—like other gases, can be confined in glass or metal vessels, beta rays pass through; the amount passing naturally depends on the thickness of the walls of the vessel. The alpha rays, for example, confined in a glass tube do not pass through the glass; the beta rays do pass through, and by interposing metal screens of foil of different thicknesses a greater or smaller quantity may be allowed to impinge on the skin. A third class of rays is also evolved during the emission of the beta rays which have been termed gamma rays. It is not decided as yet what is their true nature. They have great penetrative power; indeed, 3 inches thickness of metallic lead is not sufficient entirely to stop them. They, too, are sometimes employed for curative purposes. It is suggested that they more resemble rays of light; that they are not "matter," but waves in the ether which surrounds and interpenetrates all matter. The continuous dissolution of the element radium into other elementary states (for those of us whose chemical education dates back more years than we care to acknowledge) is not very easy to accept, but it suggests to me a comparison. It is a *disintegratio ad integrum*. Remembering the transformation of insects, we may say that the chrysalis radium, casting aside its inert shell helium, becomes the imago niton.

Another product found in mineral water is neon. In the gas given off by the Bath water it is present to the extent of 188 times as much as is contained in atmospheric air, an amount which Ramsay describes as astonishing. Neon is also supposed to be one of the products of radium, but possibly further investigations may show it to be one of the results of the disintegration of some other radium-like element which has not yet been discovered.

The radio-activity of all mineral waters exists only at the source, and such waters rapidly lose this quality. Nevertheless, it is possible by artificial means to render them permanently radio-active. Does the therapeutic potency of natural mineral water depend upon niton alone, or is the credit to be divided between it and the other, the chemical constituents—that is, with those constituents which we have till now endowed with the entire beneficence? We are told that radio-active waters can be prepared by adding 1 milligramme of radium sulphate to 1 litre of distilled water, which can then be used as a subcutaneous injection without harm. Is this artificial water as potent as natural radio-active water, or does it more quickly lose its acquired qualities? Can the radio-active water, as we find it in our springs, be used as a subcutaneous injection with advantage? These, as well as other questions, present themselves for our consideration. Such, for instance, as those connected with the statement that niton, although it has the power of rendering all substances radio-active, cannot itself, according to some authorities, be absorbed by the skin. If this were true it would seem that bathing, as far as any special benefit from the radio-activity was to be obtained, was at a great disadvantage. But a little more consideration modifies this view. In addition to the immediate relief which experience tells us occurs from mineral water baths, such, for instance, as increased mobility and lessened pain, the patient is in the best position for taking the full advantage from niton. The orifices of the body are soaked in it, and the surrounding air is more or less saturated; and thus when the patient is in the bath, with his nose and mouth just above the surface of the water, he must be most favourably situated to reap the benefits of the induced radio-activity. Moreover, contrary to the belief of those who say that niton cannot be absorbed by the skin, Professor Lazarus is of opinion that it can, and in this he is supported by Ramsay and others.

In the administration of baths much longer periods of immersion seem to be called for, and I have no doubt that the custom of spending many hours in the bath, as is the custom at Leukerbad and other resorts, has a good deal to recommend it. The large public baths, as used there, however, seem to be inadvisable; and I cannot but think that the small bathroom, due regard being, of course, given to ventilation, is preferable. The probability is that niton is none too strong, and we want to concentrate—perhaps to augment it—as much as possible.

Some authorities are of opinion that natural waters are not sufficiently radio-active to be of much service therapeutically, but on this question of their potency there are very conflicting views, and Professor Farr, of New Zealand, in an interesting discussion on the effect of radio-active spring water on trout refers to radium emanation as a gas which physically is a hundred thousand times more active than radium.

Hitherto, details of the effects of niton given off at the fountain head are not very numerous, notwithstanding the immense amount of research which has been made with regard to radium and artificially prepared radio-activity. It is urgent that those of us who have access to natural radio-active waters should fill up the deficiencies. Fortunately at Bath the waters are sufficiently charged with niton for all purposes, and may be considered saturated, and we have

[1] An introduction to a discussion at a meeting of the Balneological and Climatological Section of the Royal Society of Medicine on April 17th, 1912.

[2] THE LANCET, Oct. 30th, 1909, p. 1263.

500,000 gallons coming up daily at a temperature of 118° F. There is also available more than 5000 litres of gas.

Has the presence of niton any subtle action on the salts of magnesium, sodium, lime, and so on, which are found in indifferent waters, rendering them more absorbable or potent when brought into contact with mucous membrane? The free absorption of radio-activity by mucous membranes and by the lungs will probably alter our treatment by those routes, and we shall in the future rely upon them much more. Inhalations will be more frequent, and drinking more resorted to, for longer time and in greater quantity. The same, too, will apply to vaginal and rectal douching. This latter, the so-called Plombières method, is very popular at the present time at certain spas. Certainly, its effect in suitable cases is very striking. It is also almost certain that the future will see a great increase in the combined use of electricity and radio-active waters.

Sir William Ramsay, in his most lucid and able report, from which I have already quoted, referring to the ingenious spraying machine invented by Mr. Jones, the engineer to the bathing establishment of Bath, for use in throat and eye affections, suggests that the natural gas should be used instead of the mineral water. If this were adopted—and I have no doubt it will be—Ramsay is of opinion that "an agent, nearly twenty times as potent, would be available." He also thinks that in a similar way niton might be applied directly in the treatment of local rheumatism, especially if the patient were insulated and connected with the negative pole of a battery. In this report he further outlines a method by which the intake of niton could be very much increased by giving electric baths with a continuous current. "If," he says, "the patient in the electric bath were connected with the negative pole of a battery giving, say, 100 volts potential, or even more, and the other electrode were placed in the water, of course not in contact with the bather, the niton would rapidly reach the skin." It is, indeed, not unlikely that it would enter the system by so-called ionisation, and in this way a considerable dose might be given.

In the estimation of the value of natural water it is necessary to estimate the degree of its radio-activity, the contained volume of gas, and the amount of helium. Although helium is therapeutically useless, nevertheless its presence is an indication that we are dealing with a radio-active water. At the King's Well at Bath Lord Rayleigh found that there were 12 volumes of helium in 10,000 of the water, and some of the foreign mineral waters have been examined by Ramsay and others. Ramsay has found it impossible to compare these amounts with statements of the radio-activity of foreign waters, for the latter are stated in uncertain units and could only be determined in the special apparatus employed by the foreign scientists.

No introduction to a discussion on the subject we are joining in to-night would be complete without some reference to the valuable work of Professor His. He administers niton by means of a portable apparatus, and supplements its effects in certain cases of rheumatism by an injection of an insoluble, or repeated injections of a soluble, salt of radium in the immediate neighbourhood of the affected joints. His's article on the treatment of gout and rheumatism in the *British Medical Journal* unfortunately lacks full details of the exact method of the administration of niton. He tells us that under its influence the blood loses its uric acid within a few weeks, but the way, the time, and the dose are somewhat vague. What we require as practical balneologists is to learn how we can best utilise the niton for the benefit of our patients. It seems probable that radium emanations have a specific action on gout, and it is in cases of this disease that we may expect some of our greatest successes.

In an article by W. H. B. Aikins and F. C. Harrison, published in the *Canadian Practitioner and Review* last August, on the Present Status of Radium-therapy, the results in general are summarised as follows: (1) Greatly increased diuresis and excretion of uric acid; (2) largely increased carbonic acid exhalation, from 20 to 60 per cent.; (3) lowered blood pressure, especially in arterio-sclerosis; (4) decreased blood viscosity; (5) great improvement of gastric and duodenal digestion; (6) marked solvent action on gouty deposits; (7) the dislocation of uric acid and its salts into carbon dioxide and ammonia; (8) inhibition of inflammation and relief of pains in rheumatism; (9) increase of sexual vitality; (10) considerable influence over sympathetic nerve affections; and (11) marked results in diabetes, albuminuria, and glycosuria. All of these results I am able to confirm from personal observation in Bath, and I would add the rapid disappearance of indican from the urine.

A good deal of further work on the subject comes from Germany. It seems that the Kreuznach waters are highly radio-active and the local physicians have been studying the results of their applications in various conditions. Substantially their conclusions coincide with those just quoted, but some further information in the matter of contra-indications and best form of administering the emanations is now available.

So far as contra-indications are concerned they do not at present appear to be very definite, but there are observations enough to warn us that they certainly exist, and that, to say the least, some cases demand very great caution in the application of the remedy. Thus Meternitzky, of Kreuznach, says that he has found application of radium emanation to cause not only subjective symptoms, such as dizziness, fulness of the head, faintness, pains in the joints, but also objective phenomena, such as emaciation, albuminuria, and even hæmaturia. This, as coming from a physician practising at Kreuznach, would be a very valuable testimony even if it stood alone. But it does not. Several others who have studied the question, notably Davidsohn, who, working with an artificial radium-producer and not with mineral waters, found that rheumatic and gouty patients after radium treatment experience violent pains in the joints and aggravation of other symptoms. This is particularly interesting to balneologists as affording an explanation of what we are all so familiar with—namely, an acute exacerbation of gout soon after treatment has commenced. Other observers have described considerable rises of temperature, hæmorrhages from the mucous surfaces, and the like. It would be interesting to me personally to find any confirmation from other radio-active spas of the experience of everyone who has ever practised at Bath, to the effect that both baths and waters are definitely contra-indicated in a case where there is any suspicion of tuberculosis. Löwenthal considers that chronic nephritis, particularly of the contracting kind, affords a definite contra-indication for treatment. It is probable that at least some of the accidents and inconveniences which have been described as resulting from treatment by radium have been due to the ignorance under which we still labour on the subject of doses. I may say here that a serious disadvantage to radium research and the application of radium is the absence of a general uniform standard of measurement. Neither the counting by Volt unit nor that by Maché unit is uniform in itself, as these units differ according to the different apparatus used. At the suggestion of Löwenthal the Radiological Congress at the Brussels meeting last year appointed a committee which accepted as unit the action of 1 gramme of radium. It is hoped that this proposed Curie unit will bring order into the present confusion.

Concerning the method of administering radium, the German authorities do not agree with the views of those who attach a subsidiary importance to the balneary treatment. Thus Kemen says: "In the bathing method a certain part of the emanation passes through the skin into the blood, as was conclusively proved by Engelmann. It is also well known that during the bath the emanations readily find their way into the pulmonic circulation. Yet the bath appears to have a third mode of action in addition to these two; for, on the one hand, the fact of a very marked improvement subjective and objective is well known, yet on the other, the quantities of radium available by the pulmonary and cutaneous routes are much too small to account for the results." What this third mode of action may be it is impossible to say at present; but we should do well to bear this view in mind lest in our enthusiasm for drinking and inhalation, whose action we happen to understand, we be led into neglect of the time-honoured method of bathing, the detail of whose action is still insusceptible of explanation. We should not reject it merely because we are unable to explain it. For we must remember that there is still a great deal about radio-activity and its therapeutic action which we are unable to explain. We cannot explain, for example, by what processes it produces its therapeutic effect. If we may rely upon the work of German authorities

its action is in no sense bactericidal. We know further that it stimulates metabolism, but by what process it achieves this is not clear. It may be, it is indeed probable, that the suggestion of Dr. Leonard Williams may yet prove to be correct and that the stimulation is effected by way of the internal secretory glands. The statement that radio-activity is not bactericidal is not universally accepted. Later investigations by Lazarus Barlow seem to show definitely that it is decidedly bactericidal. But whether this action is sufficiently intense in mineral waters, or even in the gas from such waters, to be of service has, as yet, not been proved. After all, this would seem to be a minor point, for as far as present knowledge goes it is improbable that bactericidal qualities, as we understand them, are the explanation of the benefit that is derived from mineral water treatment in such diseases as gout and fibrositis.

From my own personal experience I have little to add that is of value. It seems that we balneologists are like the man in Molière's play who was delighted to find that he had been talking prose all his life. We in Bath and elsewhere have been using radium all our medical lives, and we are proportionately uplifted. But we cannot say which of our results have been due to the radio-activity of the waters and which may be accounted for by the douching, massage, and other measures upon which we have so long relied. Nevertheless, I should like to confirm from my own observation some of the clinical results that have been reported by certain observers.

The experiments by Wickham and others show that radium is destructive to the gonococcus, whilst the literature of gonorrhœal arthritis shows that the cure of this disease is usually tedious and tiresome by medical means. Nevertheless, some of our greatest successes in Bath have been with patients suffering from it. I have always in addition to the mineral water given them iodide of potassium, and it is a significant fact that the salts of potassium are radio-active, giving off beta rays, that is the valuable ones in the medical uses of radium. It may be that the action of potassium in gout and fibrositis is due to radio-activity, and that metabolism under its influence is stimulated.

In connexion with gonorrhœal arthritis it is interesting to note how remarkably well cases of iritis do with mineral water treatment. We have patients sent to us with recurrent iritis who rapidly improve and, what is still more important, do not usually relapse. Mr. W. M. Beaumont, who has seen a considerable number of these cases, doubts the very existence of rheumatic iritis at all, and believes the cases we see in Bath are almost entirely gonorrhœal, and that those which are not are due to some other form of toxæmia.

Experiments by Wickham and Degrais show that radium is not, strictly speaking, bactericidal, but that it so modifies the culture medium as to make it inimical to the growth of the gonococcus. They are of opinion that one-millionth part of pure radium in water will act on the cultures. If these views are corroborated it is probable that in the near future the whole treatment of gonorrhœa and its sequelæ will be revolutionised. Gonorrhœal ophthalmia at once strikes one as a disease in which some confirmation of these hopes should be sought for.

During the last few weeks I have been treating an old lady, aged 75, suffering from a long-standing atrophic scirrhus of the left breast by exposing it to the gas from the Bath springs. The ulcerated surfaces were exposed for 10 minutes daily, and after 12 applications all the ulcers had healed and some of the surrounding induration had disappeared. This is the first case, I believe, of malignant disease in which the gas has been used in this way. A single case is, of course, of no very great value, nevertheless it encourages us to repeat the experiment, let us hope with equal success.

I have here a radiograph taken at the Bath spring which may be of interest. I also show you two glasses, one that has been in use for several months and the other for five weeks, which demonstrate the staining effect of radium. You will notice in the fractured specimen that the staining has gone quite through the glass, which would not have been the case if it had been caused by iron. Furthermore, I have Sir William Ramsay's authority for stating that this discolouration could only have been produced by radium.

I must not take up any more time with vague thoughts and random speculations regarding a subject the importance of which we probably have not yet fully grasped. The discovery of radium with its far-reaching effects on every part of the human economy has altered our views fundamentally with respect to balneological treatment. A more scientific era has dawned. Time was when a suspicion of a man's professional integrity was raised if he called himself a balneologist; but now, instead of groping in the shades of night, our landscape is illumined by the sunshine of science, and we march along with firmer footsteps and with head erect. And as old ideas go the way of all things human, our grouping of springs into saline and chalybeate, into purgative and alkaline, and so on, must now be amended to include those which are radio-active. Let us hope that any new classification will rid us for ever of the somewhat sinister name of "indifferent waters," for they are no longer indifferent.

One final word more with regard to radium. Many of us believe that in this element we have found the explanation of the therapeutical effects of mineral water, but beyond a declaration of our faith we dare not at present go. It is a postulation that would explain the accumulated evidences of the ages. Every bio-chemical fact concerning it dovetails with the clinical effects of its application. Is it, then, any wonder that we balneologists regard radio-activity as the unknown god, and the blind worship of ages and the empirical faith of centuries as justified? To us the unknown god and his shrine are alike worthy of our homage.

Bath.

VACCINE-THERAPY IN RHEUMATOID ARTHRITIS.[1]

BY THOMAS J. HORDER, M.D. LOND., F.R.C.P. LOND.,
ASSISTANT PHYSICIAN TO ST. BARTHOLOMEW'S HOSPITAL.

NOT "the vaccine treatment of rheumatoid arthritis," but "vaccines in the treatment of rheumatoid arthritis." For it is as illogical to conceive of the use of vaccines as covering the whole treatment of this complex and distressing disease as it is to conceive of the use of tuberculin as covering the whole treatment of pulmonary phthisis. Less logical, indeed, because there is much less of a definite entity about the disease we call rheumatoid arthritis than there is about phthisis: individual cases show great variations and require different treatment, even in principle. Yet one would think, judging by the baldness of the therapeutics often adopted, that the disease is very specific in its nature, and that, provided all the patients suffering from it take sufficient guaiacol carbonate over a sufficiently long period of time, or submit to a course of ionisation of the affected joints, or undergo a series of inoculations with a micro-organism obtained from the saliva or from the stools, they will either get well or may be regarded as incurable.

Vaccine-therapy certainly occupies an important place in the therapeutist's armamentarium in this disease, but it is only one part of the available means of treatment. In some cases it is altogether unnecessary; in a few it is positively harmful. As undertaken by some practitioners who have waived the question of evidence that there is any causal connexion between the micro-organism used in the preparation of the vaccine and the arthritis, it is a discredit to modern medicine, if not injurious to the patient. This sort of vaccine-therapy has become quite fashionable at certain English watering places, a fact tending to show how little faith the balneologists have in the efficacy of their own spas.

Every case of "rheumatoid arthritis" should be considered upon its own merits. I think it would be no loss if we dropped the term "rheumatoid arthritis" altogether and spoke only of multiple arthritis, of which, after all, "rheumatoid arthritis" is only a specialised form. To pigeonhole the cases under a generic term is fatal to effective treatment, for effective treatment depends upon recognition of the differentia of the various examples as they present themselves for cure. The proper examination of the case entails two separate investigations: (1) a critical analysis of the symptoms and signs, as referable to changes in joints, muscles, nerve tissues, blood, and general nutrition; and (2) an examination which has for its special object the discovery of one or more foci of infection. In this second part of the examination careful attention is paid to the mouth, the

[1] A contribution to a discussion upon Rheumatoid Arthritis at a meeting of the West London Medico-Chirurgical Society, held on April 12th, 1912.

fauces, the nose, naso-pharynx and nasal sinuses, the respiratory tract, the small and large intestine, the urinary tract, and the uterus. The routine examinations thus involved may require special methods of clinical investigation, for they are of the utmost importance. Any lesion in one or more of these situations is carefully noted and a thorough examination is then made of the bacterial flora connected with it. This may call for great care in the collection of exudates or secretions, and is perhaps the most important of all the stages in the examination so far as the question of vaccine-therapy is concerned. Due consideration is then given to the nature and numbers of the micro-organisms obtained and the special evidence of affinity between them and the arthritis. Merely to deal with any micro-organism casually grown from a patient's gums, or urine, or fæces, is asking for disappointment in results.

In dealing with the infective focus, if such is found, it must constantly be remembered that the first principle in treatment is to secure efficient drainage. Unless this is established all vaccine treatment is vain. Local treatment, therefore, should always precede inoculation. If the local treatment involves surgical procedures, such as the extraction of several septic teeth, the excision or curetting of an ulcer, or the removal of an infected tonsil or polypus, it is sound treatment to protect the patient against a temporary exacerbation of his infection by giving him two or three preliminary inoculations with the appropriate vaccine. This is more by way of prophylaxis than as curative treatment. But to subject the patient to a prolonged course of vaccine-therapy and to leave the local focus of infection to look after itself is to reverse the order of commonsense procedures. All vaccine-therapy should be held in reserve for at least 14 days after surgical measures have been undertaken, for as a result of these measures the patient is very apt to inoculate himself, and this forms a definite contra-indication to the addition of fresh antigen or bacterial toxin whilst the temporary auto-inoculation is proceeding. Moreover, this interval will serve also to show or to indicate what good, if any, is likely to result from the adoption of local measures. Sometimes the good result is so manifest that the practitioner feels justified in holding his hand in the matter of vaccines, and if the good result continues he may do well to hold his hand altogether. Such forbearance at a time like this, when vaccines are the vogue, is all too rarely seen. Yet it is necessary, if for no other reason than to give the observer some clear view of what is due to vaccine treatment and what is not. Paradox though it sounds, it is possible that the best estimate of a man's success with inoculation treatment is the number of unused vaccines he has upon his shelves.

Assuming, then, that all the points in the general management of the case are receiving thorough attention, and that the infective focus, brought to light, is also receiving local treatment, we may proceed cautiously to raise by specific means the level of the patient's immunity against the residual infection going on at the site of the original invasion or against secondary foci in the body which cannot be dealt with directly. The means available are: (1) immune sera, by which it may be possible to supply temporarily a degree of passive immunity; and (2) vaccines, by which it is hoped to stimulate the patient to a more permanently useful degree of active immunity. If the case is acute or subacute and the evidences of intoxication are a noticeable feature of the case, the preliminary use of immune serum is indicated. In the more chronic cases, which are much more common, resort may be had forthwith to autogenous vaccines.

In actual practice the micro-organism most often incriminated as the infective element in the disease is a type of streptococcus, not S. pyogenes, but S. salivarius or S. fæcalis—i.e., streptococci of relatively low virulence, not tending to suppuration and traceable, as the names are intended to suggest, to the mouth or intestine. Other micro-organisms are much less common; the gonococcus, pneumococcus, and B. coli almost exhaust the series, as at present established by reliable observations. Perhaps Staph. aureus vel albus, B. influenzæ, and certain diphtheroids may be included in the list.

The initial dose of vaccine should always be small. My advice to many inquirers is like the schoolboys' game at arithmetic: "Think of a number; halve it." No good comes, and no time is eventually saved, by starting off with other than small doses. I use 5,000,000 killed streptococci in ordinary cases, but 2,500,000 if the case has any acute or subacute symptoms. The dose is very gradually increased, and with the increase, the time interval, which should be from eight to ten days, is increased also. I give the vaccine always by the subcutaneous route. The treatment should be continued over a period of at least three months before conclusions can be safely drawn as to results, unless there are contra-indications for suspending the inoculations, such as increase in pain or stiffness or swelling of the joints, loss of weight, or nerve disturbances. Some patients seem very susceptible to the treatment, and care must be exercised not to produce a deterioration in the general condition, which it is of such vital importance to maintain at a high level in this disease. Careful observations must be maintained, but these do not require more skill than the practitioner is himself possessed of. The use of the "opsonic index" as a guide to treatment, however theoretically attractive, does not seem in actual practice to have proved of real service. Moreover, in most streptococcal infections the phagocytic power of the leucocytes is almost impossible to gauge with any degree of accuracy.

As regards the results of vaccine treatment in "rheumatoid arthritis," it is at present extremely difficult to arrive at definite conclusions. The difficulty is due partly to the fact that, as already emphasised, inoculations should only form one part of the treatment, and partly to the fact that in so many cases irretrievable damage is already done to the joints when the treatment is begun. But allowing for these difficulties, the results are, on the whole, very encouraging. Many cases seem, more often and more quickly than formerly, to emerge from the active into the quiescent stage of the disease, and a few appear to be altogether arrested. Everything seems to depend upon the degree to which it can be confidently asserted that the micro-organism dealt with is really a causal factor, and the main one, in keeping the joints in a state of smouldering inflammation.

Harley-street, W.

THE RECURRENCE OF ADENOIDS.[1]

BY THOMAS GUTHRIE, M.A., M.B., B.C. CANTAB., F.R.C.S. ENG.,

HONORARY AURIST AND LARYNGOLOGIST, VICTORIA CENTRAL HOSPITAL, LISCARD, AND ROYAL LIVERPOOL COUNTRY HOSPITAL FOR CHILDREN; CLINICAL ASSISTANT, THROAT DEPARTMENT, ROYAL INFIRMARY, LIVERPOOL.

WHEN advising the removal of adenoids in a child one very often has to reply to the question, "Will the growth return?" It is true that the question is not very relevant, because if the adenoids are doing harm they should be removed whether they may return or not; yet it is pleasant neither to the parent nor to the surgeon to contemplate the possibility of a recurrence, which may perhaps demand a second removal. Indeed, the consent of the parent to the operation may depend on his being assured that the trouble will in all probability be removed once and for all.

It happens not infrequently to many of us that we are called upon to remove adenoids from children who have previously undergone the same operation on one or more occasions at other hands, and it may be of some little interest to consider the conditions which in such cases lead to a return of the symptoms.

Probably everyone will agree that the great majority of these cases of so-called "recurrence" are in reality instances of incomplete removal. Tilley states that in his own practice the cases in which recurrence has taken place have been those in which the operation, owing to trouble with the anæsthetic or slipping of the gag, has been incompletely performed. Bearing in mind that these are the words of an operator of large experience, one can readily understand the importance of insufficient removal as a cause of "recurrence." The removal of adenoids is, indeed, often regarded as one of the simplest and most trivial of operations, yet it is well to remember that, as Beckmann wrote some 15 years ago, "it requires but little skill to remove the naso-pharyngeal tonsil completely in a case here and there, but to do so in each of a long series of cases demands a dexterity

[1] A paper read before the Liverpool Medical Institution on Jan. 25th, 1912.

which can be acquired by long practice alone." There is, I am sure, a considerable risk of recurrence when the operator aims at removing only the larger masses of growth in the hope that the remainder will atrophy, as is recommended in a recent work on the "Operations of General Practice."

While, however, it is true that so-called recurrences are usually due to the growth of pieces of adenoid tissue which remain after incomplete operation, this does not finish the question. It is generally agreed that under certain conditions recurrence may take place even after complete removal. By "complete" I mean, of course, macroscopically so—that is, that Luschka's tonsil has been thoroughly removed, leaving a smooth raw surface free from all masses or tags of adenoid tissue. It is no doubt the case that there always remain minute, perhaps microscopic, collections of lymphoid tissue from which a regrowth of the tonsil may occur. One would expect, of course, a special liability to such recurrence during early life when the activity of the lymphoid tissues is so marked. Indeed the most important factor is probably the age of the child, and it must be admitted that in children under 4 years of age there is a decided risk of recurrence; between the ages of 4 and 7 the chances of recurrence are slight, and after the age of 7 they are practically *nil*, always provided that the operation has been complete.

The degree of recurrence which may occasionally be met with after what one may call complete removal is well shown in the following case. About two years ago I removed from a little boy, 3 years of age, a large mass of adenoids. A full-sized StClair Thomson's curette, which is wide enough to cover the whole vault of the naso-pharynx at this age, was used, and a mass representing evidently the entire hypertrophied naso-pharyngeal tonsil came away in one piece with the first sweep of the curette. No shreds of adenoid tissue appeared to have been left behind, and the roof and posterior wall of the naso-pharynx felt smooth and bare to the finger. The tonsils were at this time also much enlarged, but the parents, owing to a mistaken idea that their absence might interfere with the voice, would not allow me to remove them. Eighteen months later, however,

A B

Reproduction of photograph showing A, adenoid removed from a boy three years of age, and B, adenoid removed from the same patient eighteen months later.

the tonsils had still further increased in size, attacks of tonsillitis had occurred, and Dr. C. J. Macalister, who had originally referred the case to me, suspected some secondary enlargement of the bronchial glands. I therefore removed the tonsils and found at the operation to my surprise a considerable amount of adenoid tissue again present in the naso-pharynx. This I removed. It happened that I had preserved as a good museum specimen the mass of adenoid removed 18 months previously from the same case, and it was therefore possible to appreciate the amount of regrowth which had taken place during that period. (See figure.)

Apart from the influence of age, it is certain that recurrence is much favoured by an attack, within a short time of the operation, of one of the specific fevers, especially measles or whooping-cough. Again, according to Charles Parker, in children who are the subjects of congenital syphilis recurrence seems to be the rule rather than the exception unless the general condition is carefully treated. Lastly, recurrence is probably favoured by the presence of untreated anterior nasal obstruction especially hypertrophic inferior turbinals, and is therefore apt to be met with in patients with high arched palates and narrow nasal cavities in whom removal of the adenoid does not lead to the establishment of free nasal respiration. All of these conditions have the feature in common that they tend to excite or maintain a state of chronic post-nasal catarrh, which should, therefore, wherever it is present, receive appropriate treatment if the risk of recurrence is to be reduced to a minimum.

In conclusion, it may be remarked that a true recurrence is a somewhat rare event even in young children, and the fear of it is no argument against operation.

Liverpool.

VOLVULUS OF THE SPERMATIC CORD.[1]

BY ADAMS A. McCONNELL, B.A. (SEN. MOD.), M.B. DUB., F.R.C.S. IREL.,

ASSISTANT SURGEON, RICHMOND HOSPITAL, DUBLIN; LECTURER ON APPLIED ANATOMY, MEDICAL SCHOOL, TRINITY COLLEGE, DUBLIN.

I BRING forward the report of this case for three reasons: first, because I have been unable to discover any account of a similar case, either by verbal inquiry or by a search through the literature; secondly, the symptoms present were markedly different from those found in the more usual lesion of torsion of the cord; and thirdly, the conditions disclosed on operation were at first sight somewhat puzzling. The history of the case is as follows:—

The patient, a boy, aged 15, while at school, was suddenly seized with severe pain in the right groin. At the moment of onset he was sitting on his right foot with that leg crossed, tailor-fashion, beneath him. The pain was accompanied with a sensation of weakness and nausea. He was assisted outside the school, and during the process of an ineffectual attempt to micturate noticed a small swelling in the groin. The severity of the pain increased to such an extent that he was unable to stand on his feet. He was therefore carried home and put to bed, where he had several attacks of vomiting. A medical man then saw the boy, diagnosed a hernia, and sent him to the Richmond Hospital, to which he was admitted under the care of Mr. R. J. Harvey, to whom I am indebted for permission to operate and to report the case.

On examination, about two hours after the onset of the symptoms, the boy looked distinctly ill—his face pale and covered with cold sweat. In the line of the right inguinal canal a swelling was found; it was tense, fixed, yielded no impulse on coughing, and was tender on palpation. It corresponded, in position, to the inner half of the inguinal canal and came to an end at the external abdominal ring. The right testis was slightly larger than the left, and the spermatic cord on the affected side was more definitely palpable than on the other, but in neither of these structures was there any pain, nor did palpation elicit tenderness. The bowels had acted that morning as usual, and there had been no motion from the time of onset of the symptoms. He did not vomit after admission to hospital. Temperature 98·6° F., pulse 88. I diagnosed strangulation of an incomplete inguinal hernia and proceeded to operate forthwith, with the assistance of my colleague, Mr. H. de L. Crawford.

The ordinary oblique incision was made over the swelling. The external oblique aponeurosis and the external abdominal ring having been defined, what appeared to be the fundus of a hernial sac presented between the pillars of the ring. The aponeurosis was divided, laying bare the rest of the sac, which was seen to extend along the whole length of the inguinal canal. On opening the sac, which was lined by serous membrane, what we took to be a coil of intestine appeared; it was covered by peritoneum and was intensely congested, being of a dark purple colour. I passed my finger towards the internal ring and found that the sac came to an end at that point, and that no patency of the ring existed; neither did the coil of supposed gut pass to the region of the ring,

[1] A paper read before the Surgical Section, Royal Academy of Medicine in Ireland, on Dec. 8th, 1911.

but seemed rather to emerge through the posterior wall of the inguinal canal after the fashion of a direct hernia, but no aperture leading to the general peritoneal cavity could be found in this region. The finger could be passed freely downwards into the tunica vaginalis. We now pulled up the testis and found that when the spermatic cord was thus slackened, what had hitherto seemed to be a coil of intestine was really formed by a loop of the spermatic cord twisted on itself for two turns and rendered purple in colour by greatly distended veins. This loop of cord had bulged into the funicular portion of an infantile type of scrotal sac, and had thus obtained a serous covering. All the constituents of the cord, including the vas deferens, were included in this twisting of the loop, to which I think the term "volvulus" may be applied with accuracy. (See figure.)

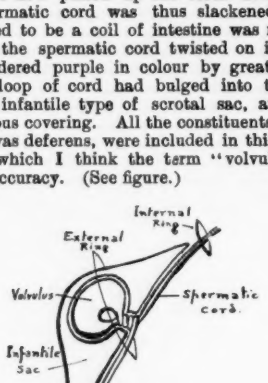


Diagram of condition found. All the constituents of the cord are included under "spermatic cord."

Considering that the condition of the vessels would be incompatible with the maintenance of the blood-supply of the testis, and having regard to the fact that necrosis of the latter often ensues after untwisting the cord in cases of torsion, I ligated the spermatic cord above the site of the lesion and removed the testis. The split aponeurosis of the external oblique muscle was then sutured, and the wound closed. The patient made an uneventful recovery, and left hospital on the ninth day after operation.

I should like to refer briefly to the diagnosis and treatment of this condition.

One would expect that twisting of a loop of the spermatic cord would give rise to practically the same symptoms as torsion of that structure. In torsion or axial rotation the testis is often imperfectly descended; in this case the testis occupied its normal position in the scrotum, nor was there evidence forthcoming that at any period it had been otherwise situated.

In the second place, torsion of the cord has usually resulted in such a swollen and acutely tender condition of the testis, often combined with redness and œdema of the scrotum, that a diagnosis of epididymo-orchitis has been made. While in those cases in which strangulated hernia has been diagnosed it was the swollen testis that was mistaken for strangulated gut, in every instance in which strangulation of an incomplete hernia had been simulated the testis of the corresponding side was absent from the scrotum. In the present case the testis was apparently normal and could be palpated without pain or tenderness, and the skin of the scrotum showed no pathological change, while a distinct swelling of other origin than the testis simulated strangulated intestine.

The absence of any history of strain is, I think, of little significance in excluding either torsion of the cord or strangulated hernia, though one would expect such a history to be present in the former condition, and would remark its absence in the latter.

We must conclude, therefore, that the usual symptoms indicating torsion of the cord are not those of volvulus of that structure, though both lesions would, from *a priori* reasoning, manifest themselves in a similar manner. In drawing this conclusion, however, from observations made in one case we are falling into the logical fallacy of arguing from the particular to the universal. The only explanation that I can offer for the absence of testicular swelling is that in all probability the arteries and veins had been occluded simultaneously, and that consequently marked venous congestion could not take place.

Regarding the treatment resorted to in this instance, if the veins of the cord had alone been involved we should have resected them after the fashion adopted in the treatment of varicocele, but on discovering that all the constituents of the cord were implicated it was considered wiser to remove the testis. Inspection of the parts removed showed that the cord was of abnormal length and that its components were more spread out than is usually the case. The testis and epididymis with their peritoneal connexions appeared absolutely normal, with the exception that the testis itself was of a slightly bluer colour than usual.

Dublin.

THE TREATMENT OF THE EARLY STAGES OF SENILE CATARACT.

BY HENRY SMITH, M.D. R.U.I., V.H.S.,
LIEUTENANT-COLONEL, I.M.S.

THIS is a subject of supreme importance both to the patient himself and to every member of the profession who has to deal with him. I have again and again been asked, "Can you do nothing to prevent the development of cataract, to cause it to disappear in its early stages, or to stay its development?" Until recently my answer has been in the absolute negative; that no such remedy is known to science. Some months ago a European lady came to me from a station 800 miles away complaining that she could no longer see to read or write, and that her vision for distance was becoming rapidly useless. On examination I found a thin nebula on the front of each cornea in the pupillary area, the result of old-standing trachoma. I dilated her pupils with homatropine and observed that the nebulæ were only partially the cause of her failing sight, as she had incipient cataract in both eyes. I explained to her that we hoped to clear the nebulæ which were very thin, and that thus we might improve her vision a little, but that she had cataract, which I would advise her to have operated on a little later. I gave her a subconjunctival injection of cyanide of mercury (20 m. of 1 in 4000). She had to leave two days after, but wrote to me about a month later that the result was marvellous as she could now see distance as well as ever and could thread a cambric needle with her ordinary presbyopic glasses. The corneal haze having cleared up was not sufficient to explain this considering the condition of the lens. It was only explicable on the understanding that the hyperæmia induced had acted on the lens as well as on the cornea. How this came about I leave to pathologists to explain.

I then determined to try this remedy on the early stages of cataract in patients whom I could keep under observation for a sufficient length of time. The following list is a small one, which I hope to supplement at a later date, but in such experimental work the ordinary illiterate villager is unsatisfactory as it is difficult to detain him in hospital long enough for observation, and it is equally difficult for a busy man to follow him up when he has left hospital. It is also extraordinarily unusual to get any details of vision from an illiterate villager with any degree of accuracy.

The following cases, which include Europeans and educated natives, show that in some cataracts the result is phenomenally successful, in others it has not been successful or only partially so. The varieties in which treatment is not successful I may be able to define at a later date. I am disposed to consider that vision that has been reduced by half or less for distance is amenable to treatment. If reduced over a half there is little hope of improvement. The most promising cases are those in which distant vision has been reduced by about 30 per cent. or under.

CASE 1.—Native soldier, aged 56. Vision formerly normal. Left eye on ophthalmoscopic examination showed immature cataract; normal fundus. Vision: 6/60 and Jaeger V. On Jan. 10th, 1912, a subconjunctival injection of cyanide of mercury (20 m. of 1 in 4000) was given in the left eye. On the 15th he could make out half the letters of 6/12. On the 31st could make out all the letters of 6/12, and with a + 2 D. presbyopic spectacle could read Jaeger II.

CASE 2.—Parsee, aged 60. The right eye had a slowly sclerosing lens with a history of three years' progress; fundus apparently normal; opacity central, a little more developed towards the temporal than the nasal side. He could

with difficulty make out 60 metre type at 7 feet with a + 4 D. lens, which he had worn for some years for distance, and a + 7 D. for near objects, with which latter lens he could read Jaeger 8½ with difficulty. The opacity in his lens was the type which ultimately becomes amber-coloured. On Jan. 20th, 1912, subconjunctival injection of cyanide of mercury (20 m of 1 in 4000) was given in the right eye. On the 26th he could read Jaeger 4 with the same difficulty as he formerly could read Jaeger 8½, and he could read 60 metre type at 15 feet. The lens he had been using for some years, as above mentioned, was + 4 D. for distance and + 7 D. for near objects. Now + 1 D. for distance and + 5 D. for near suit him best. A second injection was given on Jan. 27th. No further progress was obtained.

CASE 3.—European nun teacher. Immature cataract left eye; fundus normal. Vision 6/36; Jaeger V. Subconjunctival injection (1 in 4000) was given on Jan. 16th, 1912. On the 30th she could read Jaeger I. at 12 inches with presbyopic + 3 D. glasses, and distance 6/9. I have recently heard that progress is continuing and that she can now continue her work as a teacher with that eye so well that she wishes to put off the operation for a cataract of her right eye (which had a relatively mature cataract).

CASE 4.—European nun, aged 46. Mature cataract in left eye; immature cataract in right eye. Myopia – 15 D. both eyes. Near vision without glasses. Jaeger 14 with right eye. On Jan. 16th, 1912, subconjunctival injection of mercury cyanide (1 in 4000) was given. On Feb. 15th she could read Jaeger I. and thread a needle. The distance lens she was using previously was a – 9 D., with which before treatment she could see 60-metre type at 2 feet distance. With the same lens at a distance of 4 feet she could read 5-metre type.

CASE 5.—Railway station-master on furlough, aged 50. Incipient cataracts both eyes; fundus normal. With the left eye he could read Jaeger II. with difficulty with a + 2 D. sph. and + 1·5 D. cyl. (which he had been wearing for some time), and with + 1·5 D. cyl. he could read half the letters of 6/12. As to the right eye, with a + 3 D. sph. and + 2 D. cyl. (which he had been wearing for some time) he could read Jaeger IV. and distance 6/24. On Feb. 1st, 1912, he was given a subconjunctival injection of cyanide of mercury in both eyes. On the 10th with the left eye he could make out half of the letters in 6-metre type (8-metre type easily) and Jaeger I. with same glasses. With the right eye he could make out 6/18 and Jaeger 2½. On the 20th, with left eye, he could make out all the letters of 6-metre type and half the letters of 5-metre type at 6 metres. He could read Jaeger I. with great ease. The right eye had made no further progress.

CASE 6.—Pathan, illiterate, aged 50. Immature cataracts both eyes; fundus normal. Distance, bull's eyes 6/12; near vision, no means of estimating. On Dec. 27th, 1911, he was given a subconjunctival injection of mercury cyanide (1 in 4000) in both eyes. On Jan. 20th, 1912, distance, bull's eyes 6/6; he could thread cambric needle, which he could not do before.

CASE 7.—Officer, R.A. Right eye blind from glaucoma; left eye, lens hazy; normal fundus. He could read with his usual spectacles, Jaeger IV. with difficulty and 6/9. On Feb. 7th, 1912, he was given a subconjunctival injection of mercury cyanide (1 in 6000). On the 12th he could read all the letters of 6-metre type and Jaeger I. with difficulty. A second injection of the same mercury cyanide was given. On the 21st distance vision was 6/5. Near vision, Jaeger I. with ease with his usual spectacles. As an intelligent man he could describe the cloud gradually getting small and finally disappearing. He was about to be invalided from the army in consequence of his sight, but now could go back to military duty.

CASE 8.—Hindu clerk. Left eye, immature cataract; fundus normal. Distance vision, 6/9. He said he could see outlines of letters in Jaeger IV., but did not understand Roman character. On Feb. 13th, 1912, a subconjunctival injection of mercury cyanide (1 in 4000) was given. On the 20th distance vision was 6/5, and he could thread an ordinary cambric needle, which I consider equal to Jaeger I.

The pain induced by a subconjunctival injection of cyanide of mercury under cocaine is very severe—it lasts for three or four hours, after which it amounts to a mere inconvenience. To control this it is necessary to put the patient lightly under chloroform and to give him a hypodermic of at least 1/3rd grain of morphia. The eye looks exceedingly ugly for several days and patients should be warned beforehand not to be alarmed at this. I have never seen any evil results from the use of subconjunctival injections of cyanide of mercury; and the conjunctiva after a few weeks resumes its physiological condition.

The improvement in these cases was first noticed by the patients on the third or fourth day, and improvement goes on steadily for close on a month. Time will show if this improvement will be permanent. I hope to be able to give the condition of the patients a year hence and to supplement the list.

Cases 1, 2, 3, 4, and 8 came to me for the treatment of advanced cataract in the other eye.

Amritsar.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTE ON A CASE OF MUMPS.

BY F. DE HAVILLAND HALL, M.D. LOND., F.R.C.P. LOND.,
SENIOR PHYSICIAN TO WESTMINSTER HOSPITAL.

THE patient, aged 19 years, first experienced symptoms of mumps on the evening of March 7th. The left parotid only was affected at first, but according to the patient's account there was some swelling beneath the angles of both jaws later on, so that the submaxillary glands were evidently attacked. On the 10th he felt nearly well, and on the 14th he was declared convalescent. On the 16th he played golf (36 holes). Next day he felt rather indisposed, but on the 18th he was quite well again. On the 20th he rode from Oxford to London on a motor cycle. On the 21st he had very slight pain in the left testicle. On the 22nd there was very definite swelling and great tenderness, but very little actual pain. His pulse was 100 per minute, and the temperature was 102° F. On the 23rd the temperature remained all day between 102° and 103°. On the morning of the 24th the temperature fell to 99·2°, but by 7 P.M. it rose to 104°; at 9 P.M. it was 103·6°. It then steadily fell until it reached 98·2° at 8 P.M. on the 25th. There was a rise to 99° on the 26th, but after this the temperature was subnormal for some days. The patient was kept in bed on a light diet. Ten grains of acetyl salicylic acid were given every four hours, and the glycerine of belladonna was constantly applied to the swollen testicle.

There are several points of interest in this case. In the first place, was the testicular affection due to the patient's cycle ride? I am of opinion that it was. The next point to be noted is the date of its occurrence—viz., 14 days from the commencement of the attack of mumps and seven days after the patient had been pronounced convalescent. According to Dr. Clement Dukes the days on which orchitis showed itself in an epidemic he reported varied between the third and eighth days, so that in the case under consideration the orchitis came on later than usual. He reported five cases in which only one parotid was affected, and the orchitis was on the corresponding side. This sequence of events occurred in the present case, so that it would seem to be a rule that if unilateral parotitis is accompanied by orchitis the two affections should be on the same side of the body. Why this should be so I am not prepared to state. Another point worthy of attention is the high temperature the patient had. I have seen cases with higher temperature, but then they were accompanied by excessive pain in the testicle; whereas the patient whose case we are considering had very little pain, though great tenderness. The question arose as to whether the testicular affection had rendered the patient infectious again. I replied in the affirmative, but I have no facts to support this view. Lastly, I think there can be no doubt that the combination of acetyl

salicylic acid internally and extract of belladonna externally was very effective in relief of pain and promoting the general well-being of the patient.

Wimpole-street, W.

IRRITANT POISONING FROM CHEWING THE SHOOTS AND LEAVES OF *DIEFFENBACHIA SEGUINA*.

BY ALEX. NAPIER, M.D. GLASG., F.R.F.P.S. GLASG.,
PHYSICIAN, VICTORIA INFIRMARY, GLASGOW; EXAMINER IN MEDICINE, GLASGOW UNIVERSITY.

TWO cases of rather severe local irritant poisoning from a somewhat unusual cause have come under my observation lately. At about 4 o'clock on the afternoon of Feb. 15th a gardener employed in hothouse work gave to three labourers who were assisting him a few leaves and shoots of a plant to chew, saying they would taste just like tobacco; this was done as a trick, but the results exceeded expectations. One of the labourers simply had the plant in his mouth for a few seconds, and on tasting it at once spat it out; even so his lips and tongue became sore and swollen, but not so severely as to cause him to enter hospital. He went home and was lost sight of. The other two attended at the infirmary.

CASE 1.—The patient, a man, aged 34 years, was admitted to the Victoria Infirmary, Glasgow, about an hour after his misadventure. He had chewed the plant vigorously, mainly in the left side of his mouth, this being instantly followed by severe burning pain in the mouth, tongue, and lips, and then by marked swelling of the tongue, lips, and cheeks.

On admission speech was impossible, owing to the enormous degree of swelling of the tongue, most marked on its left side; the tongue filled the mouth, protruded slightly, and was almost quite immobile. There was a constant dribbling of saliva from the mouth. The upper and lower lips were very much swollen, especially towards the left; while the soft tissues of both cheeks were greatly swollen, indurated, and tender. Both submaxillary glands were much enlarged and tender, especially on the left side, and the left parotid gland was swollen. The tongue was coated with a thick, creamy, soft fur, its mucous covering was œdematous, with here and there some small blisters on its upper and under surfaces. Swallowing was almost impossible and breathing a matter of extreme difficulty. There was no rise of temperature throughout; all the other organs were normal, but examination of the urine showed slight reduction of Fehling's solution.

Treatment.—In view of the respiratory difficulty and of the possibility of extension of the swelling to the larynx preparations for tracheotomy were made should it be required. The operation was rendered unnecessary, however, by the vigorous use of ice externally and as far as possible by the mouth, and also by the use of a spray containing adrenalin and cocaine. Under this line of treatment the swelling and pain gradually subsided, but a week elapsed before the patient could leave hospital, and even then the left parotid gland was still slightly enlarged and tender.

CASE 2.—This patient, a man aged 52, suffered even more severely than the former one, having chewed the shoots of the plant more energetically and for a longer time. He presented exactly the same appearances locally, but on a more extensive scale, the tongue in particular being uniformly and not unilaterally enlarged. In the course of the first night after admission he was repeatedly nearly suffocated owing to recurring attacks of dyspnœa. In this case also the urine gave a slight reduction of Fehling's solution. When the patient was dismissed a week later there was still considerable enlargement of the left submaxillary gland.

There can be no doubt at all as to the extreme energy with which the juice of this plant acts as a local irritant, especially to mucous surfaces. There is not much detailed information to be got regarding it in any of the sources to which I have had access. Dorvault's "L'Officine" (Paris, 1880) has at p. 530 a short note to the following effect: "The *Arum of the Antilles; Arum* or *Caladium Seguinum, Dieffenbachia Seguina*, the *Dumb Cane* in English; derived from the West Indies, having the general appearance of a banana plant, a repulsive odour, and a corrosive and poisonous juice; used as a fomentation, as a diuretic, and a remedy for gout." Foster's "Illustrated Encyclopædic Medical Dictionary" adds little to this. After stating the plant's position botanically, among the arums, and giving a list of species, it goes on to say: "Dumb Cane, a West Indian species, highly poisonous, the juice being so acrid as to cause the tongue to swell and prevent articulation. An ointment is prepared from it by the negroes of the West Indies by boiling it in lard, which they use for dropsical swellings. The plant has also been recommended to be used internally for dropsy. A wholesome starch has been obtained from the stem. The juice is used for marking on linen."

From the foregoing it may be inferred that in olden times in the West Indies refractory slaves were made to chew the plant as a punishment, and judging from its action in the above-noted cases the power of the plant to produce dumbness (of a kind) is entirely beyond question.

Glasgow.

Medical Societies.

HUNTERIAN SOCIETY.

The Therapeutic Value of Alcohol.

A MEETING of this society was held on March 27th, Dr. R. HINGSTON FOX, the President, being in the chair.

Sir VICTOR HORSLEY opened a discussion on the Therapeutic Value of Alcohol, by remarking upon the enormous decrease in the amount of alcohol used at hospitals and other institutions in the last 25 years. This decrease was due partly to our increased knowledge of its action and partly to the number of newly discovered drugs at our disposal. More material evidence was, however, needed as to its value in clinical work, but in spite of this need, most members of the profession held a pretty decided opinion on the drug, one way or the other. Alcohol was now prescribed sometimes as a stimulant, whatever that might mean, sometimes in an exactly contrary sense as a narcotic, and, very rarely now, as a "tonic." Its narcotic action was undoubted, but he believed that the so-called stimulation effects were really the phenomena caused by the removal of the control of the highest nerve centres. The error of the belief in a tonic action was shown by comparing the appearance of dogs who had been total abstainers with that of the same breed who had been moderate drinkers over a period of three years. But old traditions clung closely to the medicinal use of alcohol. The extraordinary idea that whisky was good for rheumatism had never had any real foundation, and he had been surprised to see many medical gentlemen sampling "diabetic whisky" at the last annual meeting of the British Medical Association. Sir Victor Horsley then proceeded to deal with the effect of alcohol in certain clinical conditions. He could not speak of the treatment of pneumonia from personal experience, but he believed that whereas 25 years ago alcohol had been regarded as a sheet-anchor, it was now discarded by most physicians in treating that disease. We had certainly learnt during that period that the patient's resistance to the pneumococcus was diminished by alcohol, and the Registrar-General had even gone so far as to ascribe the excessive death-rate from pneumonia in males to the fact that they consumed more alcohol on the average than females. He asked physicians present whether blood pressure and cardiographic records showed that alcohol could be called a cardiac stimulant in pneumonia, and what was its relation to the grave symptom of arrhythmia. The effect of alcohol in pyrexia was the sum of its effect on the infective process underlying the pyrexia and its effect upon the increased katalytic metabolism that was going on. There was now a large mass of evidence to show that alcohol lowered the resistance to infecting agents. Even in very small quantities it diminished the amount of complement in the blood, it inhibited phagocytosis, it lessened the resistance of the red corpuscles to hæmolytic agents, and, as had been shown by Laitinen in regard to B. typhosus, it injured the bactericidal power of the body fluids. Proceeding to discuss the vexed question whether alcohol lessened nitrogenous destruction or no, Sir Victor Horsley was of opinion that Professor Max Gruber had got nearest the truth when he had shown that alcohol first increased the destruction of proteid, but after being administered for a fortnight or more an immunisation occurred and it acted as a true

proteid sparer. This action was, however, of no therapeutic advantage, for as metabolism would be lowered by the toxic agent the resistance to disease would inevitably be diminished as well. The net result therefore would be the reverse of profitable, and the practical experience of the fever hospitals showed that this was amply recognised now. He supposed that most surgeons had given up the use of alcohol altogether in the treatment of shock. By its action on the autonomic nerve-centres it caused a fall in blood pressure and a diminution in the respiratory excursion. Its action on the isolated heart had been the subject of many experiments, not always with uniform results. Dixon had found a definite initial increase in the work done after the addition of a 0·4 per cent. solution of alcohol, but with stronger solutions there was a paralysing effect from the first. Backmann, on the other hand, had shown that there was a gradual fall in the work done from the very first, and that arrhythmia had been produced even with very minute quantities of alcohol. The heart could easily be restored to its normal condition by substituting a weak solution of dextrose for alcohol, and tracings of these experiments showed very clearly the futility of alcohol as compared with dextrose as a foodstuff for the heart. The use of sugar in all armies and in the Boer war illustrated this point. Finally, Sir Victor Horsley was of opinion that alcohol should be avoided as a therapeutic agent, if only on account of its habit-producing properties. He feared that the medical profession had been responsible for a good deal of harm in this way. He considered that the disadvantages of the drug far outweighed its advantages, and he, at any rate, would not employ it.

Professor A. R. CUSHNY said he spoke under the disadvantage of being without strong convictions. He could not condemn the use of alcohol as a deadly sin; he regarded it rather as a drug which possessed certainly no specific action, but which brought substantial relief to many patients. Until a few years ago all pharmacologists had agreed that the stimulant action on the heart was fabulous. Then Dixon had demonstrated that the heart beat more strongly under the influence of alcohol in small quantities. He (Professor Cushny) believed that the methods of experimentation were very often fallacious. The "isolated" heart was unprotected by the plasma and was much more susceptible to drugs. In intact animals he had always found a weakening of the heart-beat from the outset when alcohol had been administered. They must dismiss the idea that alcohol was a stimulant drug of any importance to man. He did not, however, share the view that alcohol could be called a deadly poison in infective processes. It had certainly been shown that in intoxicant doses it rendered rabbits much more liable to infection, and they would all agree that the same held good for man. But as the doses used had become smaller the results had become increasingly indefinite, and he concluded that very moderate drinking could in no way be considered to lessen the resistance to infection. Alcohol, like chloral or opium, was of real use in medicine by making life more tolerable to the patient. He believed that cases of alcoholism that genuinely arose out of its medicinal use were very rare.

Dr. F. J. SMITH spoke as a practising physician. He recalled the time when as a house physician he had seen alcohol prescribed literally in quarts. He now used it very sparingly in hospital work, but he could not honestly say that the results of treatment were one whit better or worse since the old days. He prescribed alcohol in practice first because it often made life tolerable for his patients. It induced hope, and hope and the results of hope could not be measured by experiment. Secondly, he prescribed it to patients who had found that it had helped them to eat. In such cases he believed it acted indirectly as a tonic. He ventured to suggest that the heart in the experiments which had been brought forward was certainly not working under the conditions under which it worked in man. Moreover, animals, prior to any experimentation, were by nature teetotalers.

Mr. M. CURSHAM CORNER spoke after 30 years' experience in general practice. He had found whisky of great service in old people with rheumatic pains and in cases of lung trouble where there was tight breathing and the skin was not acting well. He had used brandy with success in heart disease, and had given it per rectum in cases of collapse in midwifery.

Dr. SMITH asked whether peripheral stimulation in the mouth and gullet might not play a part of some importance in the therapeutic action of alcohol. Perhaps this might explain some of the conflicting results obtained by experiments on animals on the one hand, and clinical experience on the other.

Sir VICTOR HORSLEY was of opinion that the reflex effect of this peripheral stimulation would be of very short duration. In his view most of the euphoria produced by alcohol was a delusive effect.

Mr. F. S. KIDD deprecated the value of the experimental evidence that had been brought forward. He strongly objected to experiments on animals being put before the general public as if the results obtained from them held good for human beings. Sir Victor Horsley had told them the effect of alcohol in diminishing the resistance to infecting organisms, but he would like to ask what effect alcohol had on, say, the pneumococcus itself? Did it not diminish its vitality? He had himself been injecting alcohol into urethræ infected with gonococci, and he had found that the gonococci were considerably the worse for the injection. He regarded alcohol as a lubricant which greased the wheels of life.

Dr. T. B. HYSLOP (President of the Society for the Study of Inebriety) congratulated Sir Victor Horsley and the others who had taken part in the discussion on the temperate way in which they had handled the subject. The question whether he was justified in using alcohol had often come before him in the treatment of mental disease. He had often encountered grave conditions of insomnia which seemed to be untouched by all hypnotics. He recognised that alcohol, like chloral, bromide, and other drugs, exerted a deleterious effect on brain cells. The ordinary nightcap he regarded as exceedingly deleterious. Alcohol was first taken for its exhilarating effects, and later it was found impossible to sleep without it. He believed that the hypnosis produced by alcohol was in the nature of an auto-intoxication, for the oxygen used to eliminate the alcohol was drawn from the supply available for oxidising the ordinary waste products of metabolism. For this reason a subject in whom sleep had been induced by alcohol woke up feeling very tired. In asylum practice alcohol had gradually been eliminated from diet as well as from therapeutics.

The discussion was adjourned until Wednesday, April 24th, at 9 P.M., at the London Institution, Finsbury-circus, E.C. All members of the medical profession are invited to attend. The President, Dr. R. Hingston Fox, will open the adjourned discussion, summing up the arguments of the speakers on the opening night. It is expected that the following will speak: Sir T. Lauder Brunton, Mr. C. W. Mansell Moullin, Dr. W. H. B. Stoddart, Dr. E. W. Goodall, Dr. Langdon Brown, and Dr. A. S. Currie. Sir Victor Horsley will reply.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

Rheumatoid Arthritis.

A SPECIAL meeting of this society was held on April 12th at the West London Hospital, Mr. W. MCADAM ECCLES, the President, being in the chair.

After an instructive exhibition of cases, skiagrams, museum specimens, and bacteriological preparations had been examined, the PRESIDENT introduced a series of short papers and demonstrations with a working definition of Rheumatoid Arthritis as follows: An arthritis affecting many joints, but chiefly the smaller ones, and occurring usually in the female sex, and always due to the absorption of a toxin.

Dr. F. J. POYNTON gave a short account of experimental work on the causation of the disease, illustrated with lantern pictures. Dr. Poynton said that he would take only one comparatively small point in the great problem before them, and which, perhaps, some might think hardly deserving of the occasion. This was the demonstration that one micrococcus—namely, that which he believed to be the cause of acute rheumatism—might experimentally produce in animals various types of arthritis. He would demonstrate by lantern slides and specimens the occurrence of acute transient arthritis, osteo-arthritis, and peri-articular arthritis. In all these examples he would emphasise that no suppuration had occurred. The different lesions depended upon the severity and duration of the arthritis, which resulted from intravenous inoculation. He himself believed that among the many

causes of rheumatoid arthritis acute rheumatism was one, and he wished to make it clear that to differentiate a case as one of rheumatoid arthritis upon the character of the arthritic lesions alone was possibly to be led into error. He thought it was a distinct step forward to be able to reproduce such lesions as he showed that evening. They were the result, not of direct infection of a joint which he thought to be of little scientific value, but of intravenous inoculation. The histology of the capsule of the joints in these lesions was interesting because it showed a perivascular fibrosis in the chronic cases, which seemed to explain the tendency to atrophy of these structures and the consequent stiffness of the articulations as the result. He thought the problem of the etiology was distinctly nearer solution, and to him it was narrowing itself down to these points. If they took away all the infections known to produce a severe non-suppurative arthritis, was there still left some specific unknown infection? Could rheumatoid arthritis arise without some infective agent? He had investigated for Mr. A. E. Barker with Dr. A. Paine a considerable number of rheumatoid joints, and was inclining to the belief that just as certain streptococci and bodies of the streptococcal group might produce these lesions, so also might some staphylococci in the staphylococcal group. Unfortunately, just as was the case with animals, cultures from these human joints, though grossly diseased, were repeatedly negative, and this made advance very slow in this direction. He would like to express his admiration for the investigations by Mr. K. W. Goadby upon dental suppurations. They would understand from his remarks that he inclined to the view that rheumatoid arthritis was a result of many infections, and that though he believed the constitution of the patient took a most important part in the history of the disease, he rather doubted the possibility of such lesions arising without the addition of some infective agent.

Mr. E. LLOYD-WILLIAMS read a paper on Oral Sepsis in relation to Rheumatoid Arthritis. He said that the conditions of the teeth favouring infection were: 1. Stagnation of food around the necks of the teeth and on the gums. This condition was frequently diagnosed as pyorrhœa alveolaris, but thorough cleaning and restoration of function cured it. 2. Caries of the teeth. As the primary agent in producing No. 1 this was a serious cause even when only one tooth was attacked and the nerve exposed. A septic pulp was frequently a source of general infection. 3. Chronic septic periostitis or pyorrhœa alveolaris. The diagnosis was more difficult than was often supposed. The main features were exudation of pus on pressure of the gums around the tooth, after clearing away the immediate food débris and tartar surrounding the tooth and searching for pockets between the tooth and gums. Where this disease was present a straight probe instead of being stopped just below the gum margin passed to a varying distance along the root of the tooth according to the gravity of the condition. The attachment of the tooth in the jaw was a joint known as gomphosis, and it was suggested that the chronic septic periostitis was itself an arthritis. This condition of the teeth was not infrequently accompanied by arthritis of other joints, and removal of the septic foci in the mouth alone brought about improvement.

Mr. W. J. MIDELTON read a paper on Counter Irritation in the Treatment of Rheumatoid Arthritis. He said that for many years he had relied chiefly on certain forms of counter irritation, viz.:—1. Blisters followed by the application of savin ointment to the raw surfaces. These were applied near the cervical and lumbar enlargements of the spinal cord. Also, if necessary, small blisters might be applied to affected joints. In this method a purulent discharge was aimed at and kept up for 14 days as a rule. 2. Puncturing the skin with fine needles and immediately painting over the area thus treated a mixture of croton oil, cantharides, acetic acid, and almond oil. This procedure usually brought out an eruption of pustules which varied in size in individuals. 3. The galvano-cautery. Light touches were made on the skin in the neighbourhood of the cervical and lumbar enlargements of the spinal cord and also of affected joints. Any one of the above or a combination of all three might be employed in the treatment of a single patient according to the judgment of the practitioner. In the hands of those who were skilled striking results had been obtained by such means. Over 300 cases had been treated by the spinal blistering method, and at least 1000 by the other two mentioned. Some had stigmatised them as revivals of mediæval barbarism, but he contended that patients undergoing treatment by either did not suffer one-tenth as much as hundreds of patients daily did who were recovering from surgical operations and had open wounds. Properly carried out they were almost painless, and no practitioner should attempt such work until he had been carefully instructed by one who was experienced.

Dr. T. J. HORDER'S paper on Vaccine-Therapy in Rheumatoid Arthritis, which appears on p. 1053 of this issue of THE LANCET, was read by Dr. A. E. STANSFELD.

The PRESIDENT then opened the subject to general discussion.—Dr. Ll. JONES LLEWELLYN pointed out that the vaso-motor phenomena in this condition were identical with those of Raynaud's disease.—Dr. PRESTON KING spoke from his experience at the Royal Mineral Water Hospital at Bath.—Mr. ERNEST H. SHAW said that, in spite of the confusion in nomenclature and the differences in morbid anatomy, the predominant change in all cases was that typical of chronic inflammation. He did not believe that any one organism was specific. He described three cases which had improved under treatment by vaccines from three different organisms. These cases encouraged one to persevere with this form of treatment, and they also showed that different regions of the body were the apparent primary seats of infection, and that the infecting organisms were of different kinds. He urged that in an endeavour to relieve the patient the primary focus be found by careful search of such regions as the mouth, nose, cervix, and rectum. If any one site could be found a bacteriological examination should be made and the causal organism isolated if possible and a vaccine prepared. Of course, vaccine treatment should be accompanied by ordinary surgical treatment and drainage of a primary focus when this was possible.

Dr. BRAXTON HICKS showed an Agar-agar Culture of an Organism Isolated from a Joint in a case of Osteo-arthritis. The organism was a strepto-bacillus of the type described by Goadby as isolated from the mouth in pyorrhœa.

BRIGHTON AND SUSSEX MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held at the Queen's-road Dispensary on April 4th, Mr. T. H. Ionides, the President, being in the chair. Among the cases and specimens shown were the following:—Dr. Walter Broadbent: The Larynx of a child aged 2½, in which both vocal cords and a portion of the epiglottis were destroyed by tuberculous ulceration. In the lungs there was only recent miliary tuberculosis, no consolidation and no caseation. In the abdomen there were large caseating glands and extensive tuberculous ulceration of the intestine.—Mr. R. F. Jowers: A man, aged 32, from whom he had removed a tooth-plate four days after it had been swallowed, by œsophagotomy. An X ray photograph showed the plate in the first intercostal space to the left of the sternum. The patient made a good recovery.—Dr. J. R. Steinhaeuser: A middle-aged man who had been wasting for six months and who had dysphagia. A malignant growth of the œsophagus was suspected, but the X ray screen showed a bulging of the arch of the aorta suggesting aneurysm.—Mr. G. Morgan: A man with a peculiar patch of redness down the centre of the tongue which had been present for six months, and which had remained practically stationary. Query, lichen planus.—Dr. Donald G. Hall: A case of Progressive Muscular Atrophy, and another of Multiple Heart Lesions.—Dr. C. F. Bailey: A woman with a Cut Median Nerve, which had been secondarily sutured three months after the accident. The patient was showing signs of recovery.—Dr. E. Hobhouse opened a discussion on the Therapeutics of Vaccines, the debate on which was adjourned to the next meeting.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on April 3rd, Dr. F. R. Mutch being in the chair.—In a short paper on Obturator Hernia Mr. A. R. Anderson said that six cases had recently been treated in the Nottingham General Hospital. Five of these were elderly females and one case recurred fatally within six months. In none of these cases could a lump in the thigh be felt, nor was there any special pain along the obturator nerve. In fact, in all these cases the symptoms were those of intestinal obstruction, and in all cases an abdominal operation was performed for its relief. As soon as the cause of obstruction has been localised the patient should be placed

in the high Trendelenburg position. In most cases the bowel was severely nipped by the fibrous arch of the obturator membrane forming the border of the canal, and this was likely to produce gangrene of the gut. With a view to performing a radical cure, Mr. Anderson advised that in women a portion of the broad ligament should be sewed over the opening. In man a flap of the obturator internus muscle should be turned over the opening. The mortality of these six cases was 50 per cent., and was due to the great difficulty in diagnosing the herniæ. It was therefore worth while in the case of an old woman suffering from signs of partial intestinal obstruction to bear in mind the possibility of an obturator hernia being present.

LIVERPOOL MEDICAL INSTITUTION.—A meeting of this society was held on April 11th, Mr. Robert Jones, the President, being in the chair.—Mr. A. A. Mussen, for Dr. E. W. Hope, read a note on the strike of last summer and its effect on the health of the city, when the strikers prevented the transport of food, scavenging, and even the sale of milk at the municipal depôts. The effect was seen in the rise in the mortality from infantile diarrhœa in those districts affected by the strike, while there was no corresponding increase in the unaffected districts. When the schools reopened towards the end of the strike there were four times the usual demand for free meals for the starving children.—Dr. W. B. Warrington read a second note on the results of operation in cases presenting the brain tumour syndrome. He said the grave prognosis was mitigated by the following facts: recovery without operation occurred; recovery occurred after simple decompression operation in cases which were either cases of the condition of pseudo-tumour or chronic acquired hydrocephalus or serous ependymitis, or else such cases as chronic circumscribed arachnitis. The third modifying consideration was the frequency of cysts and their great curability.—Dr. John Hay reported three cases in which the bacillus paratyphosus B. was apparently the cause of a prolonged illness. The cases were sporadic, and had no relationship one with the other. The diagnosis was based on clinical condition and on the result of agglutination tests carried out by Dr. Cox. Two of the cases were fatal, but no necropsy was obtainable.—Dr. R. Stenhouse Williams, Dr. Leith Murray, and Dr. A. J. Wallace communicated a paper on Coliform Organisms in the Female Bladder, their Relation to Pathogenic Conditions, with a Study of Some Cases Treated by Autogenous Vaccines. Catheter specimens of urine were taken with due precautions from 26 cases showing no evidence of bladder or kidney infection: 11 showed B. coli before operation, 24 after operation. A further series of 12 specimens obtained by puncture of the bladder through the peritoneum showed B. coli in 4 cases. It was concluded, therefore, that the presence of B. coli in the urine did not necessarily prove that this was the cause of pathogenic changes. The interagglutinative reactions of the various strains of B. coli differed markedly; the use of stock B. coli vaccines was not, in the opinion of the authors, justifiable. The bacteriological analysis of nine cases in which coliform organisms were giving rise to pathogenic changes showed that only in one case was true B. coli isolated. Two others showed lactose fermenters not B. coli; two showed non-lactose fermenters, and four cases showed mixed growths, the non-lactose fermenters predominating. In these cases true B. coli was only on one occasion the single cause of the pathological condition. The results of treatment with autogenous vaccine in 13 cases of cystitis or pyelocystitis were detailed. Six of these were very acute, and in all an immediate improvement was produced. The cure did not necessarily imply the sterilisation of the urine. Cases of pyelocystitis in pregnancy proved the most resistant, and treatment as a rule had to be continued till after delivery. In subacute and chronic cases a marked and speedy improvement was forthcoming in every case, but it was found that the total elimination of pus from the urine was a lengthy matter. Small doses (5 to 10 millions) at short intervals) were recommended in acute cases, and larger doses (50 to 300 millions) at longer intervals in more chronic cases.

THE SOCIETY FOR THE STUDY OF INEBRIETY.—The annual meeting of this society will be held in the rooms of the Medical Society of London at 4 P.M. on April 23rd, when the Rev. J. H. Bateson will open a discussion on Alcoholism in the Army and Navy.

Rebiews and Notices of Books.

1. *Fourth Report of the Wellcome Tropical Research Laboratories, Khartoum.* Dr. ANDREW BALFOUR, Director. Vol. A. London: Published for the Department of Education, Sudan Government, by Baillière, Tindall, and Cox. 1911. Pp. 404, with 174 illustrations. Price 21*s.* net.
2. *Second Review of Recent Advances in Tropical Medicine, Hygiene, and Tropical Veterinary Science, being a Supplement to the Fourth Report of the Wellcome Research Laboratories, Khartoum.* London: Published for the Department of Education, Sudan Government, by Baillière, Tindall, and Cox. 1911. Pp. 448. Price 15*s.* net.
3. *Fourth Report of the Wellcome Tropical Research Laboratories at the Gordon Memorial College, Khartoum.* Vol. B, General Science. London: Baillière, Tindall, and Cox. 1911. Pp. 333. Price 18*s.* net.

1. THE ancient Egyptians are credited with having possessed a high order of medical knowledge. Skilled practitioners were plentiful in Egypt's palmy days, so much so as to lead to a Homeric description of that country as being a land where "each one is a physician skillful beyond all men for verily they are of the race of Paeon" (the physician to the gods). But it can scarcely be contended that at the present time the modern Egyptian possesses any special reputation in scientific medicine. His place, however, in this respect has been taken by the "foreigners," who have been selected to hold responsible medical posts in Egypt and the Sudan.

We are prompted to these remarks by the recent publication of the Fourth Report of the Wellcome Tropical Research Laboratories at the Gordon Memorial College, Khartoum, of which Dr. Andrew Balfour is the director. It is issued by the Department of Education of the Government of the Sudan, and when we come to think of it, the fact is remarkable that a report containing material of the highest scientific and practical value to the medical world should emanate from Khartoum, where formerly indescribable cruelties and horrors were practised by the Khalifa, and where the people lived under the constant menace of the slave-raider, the sword, the rope, as well as famine and pestilence, and where dire havoc was wrought among the population by the fanatical dervishes. Now at the Wellcome Laboratories Dr. Balfour and his staff of eight or nine skilled assistants, with the occasional help of volunteers from Europe or America, attracted by the reputation of the institution, carry out investigations on endemic and epidemic diseases in man or beast, and advise appropriate measures for checking them. The conditions of tropical life of plants as well as animals are carefully studied, special attention being directed to insects and insect-borne diseases. Sanitary investigations are undertaken, water and foodstuffs are tested, bacteriological assistance is given to medical practitioners and to the civil and military hospitals. Dr. Balfour is medical officer of health for Khartoum, and has the sanitary supervision of some 60,000 people, having British sanitary inspectors to assist him. In addition to the laboratories at the Gordon Memorial College, there is a floating laboratory which can be towed to distant points up the Nile, and there is a steam wherry in which the staff can travel when necessary in the course of special inquiries in the extreme south of the Sudan.

Two dread diseases threaten the Sudan—sleeping sickness and kala-azar. The former shows a tendency to spread northwards from Uganda and from the French and Belgian Congo States, including Lado; while the kala-azar cloud seems to be gathering in that part of the Eastern Sudan bordering on Abyssinia. Included in Dr. Balfour's report is an

interesting contribution by Colonel H. B. Mathias, D.S.O., R.A.M.C., principal medical officer, Egyptian Army, and President of the Sudan Sleeping Sickness Commission, which gives some account of the administrative measures that have been taken in the Southern Sudan against the advance of that disease. Other articles are furnished by the members of the Commission appointed to investigate the prevalence and cause of kala-azar in the Eastern Sudan. Dr. Balfour himself contributes no fewer than 15 articles, some of them highly technical, others eminently practical; such subjects as Spirochætosis of Sudanese Fowls, Fallacies and Puzzles of Blood Examination, Fevers in the Sudan, Some Aspects of Tropical Sanitation, and the Water-supplies of Town in the Tropics indicate the scope of Dr. Balfour's own work. His chief assistant, Captain R. G. Archibald, R.A.M.C., attached to the Egyptian army but acting as pathologist to the Wellcome Laboratories, also contributes a number of valuable articles on various subjects, such as the Alkalinity of the Blood in Kala-Azar, Herpetomonas Lygaei, and the Presence, Type, and Possible Significance of Lactose-fermenting Bacilli in Sudan Surface Waters, and in the Fæces of Man and Certain Domestic Animals.

The previous report on the work in these laboratories was issued in 1908, and the material which has accumulated since then has been so great that it has been found impossible to compress it into one volume. Two volumes, therefore, are being issued, the first volume, A, dealing with medical topics, while the second volume, B, deals with matters of general scientific interest.

2. A Second Review of Recent Advances in Tropical Medicine, Hygiene and Tropical Veterinary Science has also been issued under the editorship of Dr. Andrew Balfour, assisted by Captain Archibald, and in collaboration with Captain W. B. Fry, R.A.M.C., and Captain W. R. O'Farrell R.A.M.C., now attached to the Egyptian Army. This work is in continuation of the *First Review* published in 1908 which met with so much deserved success; it summarises the most important of the recent discoveries in tropical medicine, and gives a comprehensive record, derived from a great variety of sources, of the existing state of our knowledge of tropical medicine; it also supplies a very useful book of reference which may be used as a guide to the bibliography of this very valuable branch of medicine. The subjects are arranged in alphabetical order, and there is a full and excellent index to assist the inquirer. Dr. Balfour and his co-workers are to be congratulated on the very successful result of their arduous labours. The volume, it may be mentioned, deals not only with the diseases met with in the Sudan but covers the whole scope of tropical medicine. The compilation of the material must have entailed a vast amount of labour and involved the consumption of an enormous amount of time; no pains seem to have been spared in its production. It is a matter for regret that, owing to the increasing multiplicity of duties devolving on Dr. Balfour in his many capacities at Khartoum, these reviews will no longer be continued by him and his colleagues, but will in future be carried on by other hands. It appears to us that, however capable Dr. Balfour's successors in this work may be, many members of the medical profession will miss his guiding hand and his unwearied devotion in the cause of his brethren who work in tropical lands.

3. Volume B of the Report deals with general science, and contains articles upon agriculture, agricultural (and to a certain extent other) chemistry, entomology and other sections of zoology, anthropology and folklore, and municipal engineering. In a way it may be said that all these subjects have their medical side, but more especially the zoology and the anthropology. The report of the entomological section is written by Mr. H. H. King, and it would seem that the plague of flies that afflicted the Pharaoh of the Scriptures is still in evidence, for mosquitoes, other blood-sucking flies, and ticks abound. We note that on p. 127, under the heading *Cimicidæ*, Mr. King states: "When the last report of these laboratories was issued it was believed that bed-bugs were responsible for the spread of ..... kala-azar. Since then, however, the researches of Captain D. S. B. Thomson and Lieutenant W. E. Marshall, R.A.M.C., in this country, and of others working elsewhere, seem to prove that in this case, at any rate, these obnoxious insects may possibly have been unjustly accused." The most recent researches, however—those of Captain W. S. Patton, I.M.S.—show that the bed-bug is the host and carrier of the parasite of kala-azar.[1] Professor Franz Werner describes various forms of scorpions and spiders. Among the latter is a group known as Solifugae, which are feared as much as or more than scorpions, although no poisonous apparatus can be detected. They are of large size and hairy. May it not be possible that the hairs can give rise to an irritation similar to that caused by the great Mygale of South America, described by Bates?

Of the anthropological articles the first, by Dr. C. G. Seligmann, gives an interesting account of the Divine Kings of the Shilluk tribe. These kings are one more example of the many collected by Dr. J. G. Frazer in his *Golden Bough* of a divine king who was ceremonially killed on beginning to show signs of old age or ill health lest his diminishing vitality should affect for evil cattle crops and their people. The second article, appealing perhaps to a wider audience than that by Dr. Seligmann, is by Captain R. G. Anderson, R.A.M.C., and treats of Tribal Customs in Relation to Medicine and Morals among the Nyam-Nyam and Gour Peoples. Medicine is naturally in the main magic, although some drugs are used together with baths, fomentation, and cupping, both dry and wet. Diseases other than those obviously due to wounds, accidents, and the like, are, as among all primitive peoples, ascribed to witchcraft or demoniacal possession. Human nature is much the same all the world over, and magical processes have an extraordinary similarity, whether among savage Africans, the primitive tribes of the New World, or mediæval or modern uneducated Europeans, and Captain Anderson's paper proves the world-wide prevalence of a state of mind which is just what anyone conversant with any primitive tribes would have expected. In another field, that of fashion, one curious custom almost universal among the Gour women—namely, that of wearing discs of wood or metal slipped into a perforation in the lips—has a striking parallel on the other side of the world, that is to say, among the Botocudos of Uruguay. These people wear a single block, but the Lenguas and Tobos of Paraguay wear a block in each lip, just as do the Gour women. So universal and useless a custom must have its origin in some fundamental primitive belief, which is now lost.

The present era has been called the age of science, and there is perhaps nothing which shows the correctness of this title so much as the fact that when our own country, or any other great power, colonises or becomes responsible for the government of any semi-civilised country the authorities in control pay special attention to scientific matters, such as hygiene, epidemiology, and the many ancillary studies which have an influence upon health.

Direct Laryngoscopy, Bronchoscopy, and Œsophagoscopy. By Dr. W. BRÜNINGS. Translated and edited by W. G. HOWARTH, M.A., M.B., B.C. Cantab., F.R.C.S. Eng. London: Baillière, Tindall, and Cox. 1912. Pp. 370. Price 15*s.* net.

THE present book is a translation, in a revised and expanded form, of Dr. Brünings's well-known work "Handbuch für die Technik und Methodik der direkten Okulären

[1] THE LANCET, Feb. 24th, 1912, p. 520.

Methoden," which was published in 1910.[1] The first section of the original German edition, entitled "Die Technik," has for the most part been omitted. It dealt with the theoretical considerations underlying the construction of the author's instruments. These instruments have now acquired a wide-spread recognition, and the introduction of the theoretical considerations would therefore be superfluous. The space which has been gained by omitting that part of the book has been utilised to expand the section dealing with the method itself in its clinical application. As the result of the expansion of the clinical side about one-third of the matter in the present work is entirely new and embodies Dr. Brünings's very great practical experience. In this connexion, the section dealing with direct operations on the larynx has been completely rewritten, and an entirely new chapter on bronchoscopic operations and methods of treatment has been added. Although there are details which may be wearisome to the skilled observer, for the beginner these details had to be included if a written description was in any way to replace personal instruction. The laborious task of translation has been carefully and efficiently carried out by Mr. Howarth, and from him originated the suggestions of compressing the technical side and of expanding the clinical side, suggestions with which Dr. Brünings readily fell in and adopted in a way that both sides of the subject have received due treatment.

Dr. Brünings's work has become a standard text-book on the continent, and Mr. Howarth's translation of the book will be the means of enabling many practitioners in this country to approach a first attempt at broncho-œsophageal manipulation with expectation of success.

Practical Anatomy; the Student's Dissecting Manual. By F. G. PARSONS, F.R.C.S. Eng., Lecturer on Anatomy at St. Thomas's Hospital and at the London School of Medicine for Women, &c.; and WILLIAM WRIGHT, M.B. Vict., D.Sc., F.R.C.S. Eng., Lecturer on Anatomy at the London Hospital, &c. In two volumes. Vol. I., pp. 467; Vol. II., pp. 382. With numerous illustrations in the text. London: Edward Arnold. 1912. Price 8*s.* 6*d.* net each volume.

IT is not possible to review these volumes with any justice without taking into account some of the modern tendencies of medical education. The authors tell us in their preface that the work has been undertaken with the sole aim of providing only that knowledge of the human body which is of actual use to the student, both in his examinations and in the subsequent practice of his profession. The average medical student has a very definite learning capacity and a very limited time in which to learn, and it should therefore be the teacher's aim to make such selection of the knowledge at his command as can be retained in the memories of the bulk of his students. What the teacher selects as being the maximum knowledge of the human body which can be properly assimilated by the average student in some 15 months must, therefore, be wisely chosen, so that useful facts and helpful methods may be learned, rather than interesting details and fascinating theories.

The teaching and examining experience of the authors of these volumes should be a sufficient guarantee that the selection they have made is one that, at any rate, has proved its worth with a very large number of students. It might seem that the issue of such a work was a retrograde step, for it may be argued that anatomy is such a stereotyped and definite subject that the whole of it may be presented to the student so that he may sift for himself among the minutiæ and retain all that his particular capacity can accommodate. Unfortunately, experience shows that when the student does the sifting for himself all too often the larger things escape his notice and memory, while the trifles are retained. It is such trivialities as "the gangliform enlargement on the nerve to the teres minor" that are retained in the mind long after facts of paramount importance are forgotten.

The authors have recognised that though a quart may be poured into a pint pot some will surely overflow. They have recognised, too, that the smaller measure more nearly represents the average student's capacity, and the remainder of the material they have eliminated altogether, instead of relegating it to the small print which has such a fatal attraction for the majority of students. It is one of the curious facts concerning the human mind that a footnote or a small print paragraph is more apt to be studied and remembered than the essential matter-of-fact subjects embodied in the ordinary text. The purpose of the work is, therefore, well defined; but for the student the Golden Age will come only when the examiner as well as the teacher cultivates this aim and adopts the pint standard. These volumes are, therefore, not to be reviewed as representative storehouses of the learning of English anatomists, but rather as containing the useful knowledge of the human body which the average English teacher can impart to the average English student during the short time allowed for the study of human anatomy. Regarded from such a standpoint the authors are deserving of great praise, and it is particularly refreshing to open a work on anatomy in which one does not recognise a single illustration as being taken from some familiar plate, even though some of them are somewhat crude in execution. The varied merits and styles of draughtsmanship, which render the illustrations somewhat uneven, and the slips inevitable in a new book, are all the criticism that one can justly level against the manual. Even this criticism is given grudgingly for fear lest subsequent editions should so evolve as to do away with the simplicity which makes the prime value of the work. Other books on practical anatomy have undergone a steady development until their special sphere of utility has been overstepped, and the reviewer feels that it is best to stay the hand of criticism lest footnotes and small-type paragraphs be inserted in deference to the opinions of the critics. The authors are to be wholly congratulated.

Minor Surgery. By LEONARD A. BIDWELL, F.R.C.S. Eng., Surgeon to the West London Hospital, Dean of the Post-Graduate College. With 88 illustrations. (London Practitioners' Manuals.) London: Published for the University of London Press, Limited, by Hodder and Stoughton and Henry Froude. 1911. Pp. 265. Price 6*s.* net.

THIS is one of the early volumes of a new series of books intended for the senior student and for those in general practice who intend to keep up with the current teaching of the day, and such is now the resolve of most members of our profession. We hope that subsequent volumes will maintain the high standard set by this work. Much of the technique of surgery is omitted from the larger surgical treatises, and it is recognised that help is needed to enable those who learned their surgery some years ago to appreciate the teaching of the present day. Never before in the history of surgery has progress been more rapid than at the present time, and even from year to year, or almost from day to day, differences of technique are to be found in the practice of the most advanced surgeons. The first book to teach "minor surgery" was written now many years ago by the late Mr. Christopher Heath, and that set a good example which has been followed by many others. One difficulty that arises is to determine what is meant by minor surgery; it is clear that no sharp line can be drawn, but there is a very distinct tendency to include more and more in such works.

We think that Mr. Bidwell has exercised a wise discretion in what he has included in this work. Practically all that

[1] THE LANCET, Nov. 26th, 1910, p. 1569.

will be required will be found there, and many useful hints are given which are the fruit of experience and which will be valuable to the practitioner. The book will prove useful to the practitioner, the senior student holding a surgical dressership, and the newly appointed house surgeon. It is well printed and attractively bound, and reflects credit on the printers and publishers.

A Manual of Midwifery. By T. W. EDEN, M.D., C.M. Edin., F.R.C.P. Lond., F.R.C.S. Edin., Obstetric Physician with charge of out-patients, and Lecturer on Practical Midwifery and Gynæcology, Charing Cross Hospital; Physician, Queen Charlotte's Lying-in Hospital, &c. With 339 illustrations in the text. Third edition. London: J. and A. Churchill. 1911. Pp. 709. Price 15*s.* net.

THE merit of this book is well shown by the rapidity with which the successive editions follow one another. In this, the third, the author has carried out an extensive revision, so that the size of the work has increased by some 150 pages, and 60 new illustrations have been added. The plates have been eliminated and all the figures are now in the text—an improvement, in our opinion. In the section on embryology an account has been incorporated of the earliest human ovum known, the so-called Teacher-Bryce ovum, and the estimated age of the other early human ova, as reckoned by Teacher and Bryce, is accepted by the author. The chapter on the development of the placenta and of the manner in which the early nutrition of the ovum is carried out is particularly good.

The description of the management of normal labour has been added to, with new and better figures illustrating abdominal palpation. It is perhaps a pity, in view of the fact, as the author rightly points out, how much can be learnt by examination of the abdomen, that the description of the method of making a vaginal examination should precede that of abdominal palpation, since in actual practice the abdomen should always be examined before an internal examination is made. We note on p. 290 the statement that women are usually delivered in Sims's position. This is not strictly accurate; it is probably the exception for any patient to maintain the true Sims's position during her labour, and it is certainly not the position patients usually assume. In the treatment of cases of labour in patients with contracted pelves considerable stress is laid on the importance of allowing spontaneous labour to take place whenever it will, and of permitting the second stage to continue without interference for as long a time as is possible.

In the section on the treatment of placenta prævia we notice that Dr. Eden apparently favours the performance of Cæsarean section for such "a case in which there has been serious hæmorrhage, and in which from the position of the placenta it is anticipated that delivery cannot be effected without further serious loss of blood." In treating severe cases of eclampsia, if other measures fail, he also suggests Cæsarean section. In discussing generally the management of labour in cases of eclampsia, he says: "In cases of great severity it appears inherently probable that serious operative methods of rapid delivery may be absolutely injurious in the enfeebled state of the patient, while it is certain that they offer no sure prospect of immediate relief." It is a little surprising, therefore, to find almost on the next page the advice given in the treatment of a severe case "if the patient is not in labour and the measures adopted produce no marked improvement in the general condition, Cæsarean section may be performed." In the medicinal treatment of such cases we find that the author still follows the old advice to administer croton oil or calomel, although the patient is probably unconscious, or may be in profound and continuous coma. It is very doubtful whether the recommendation to carry on continuous subcutaneous infusion is wise, in view of the danger these patients run from pulmonary œdema. The practice of saline transfusion, in our experience, if carried too far, is not uncommonly productive of harm. The best treatment for a severe case of eclampsia will always, in the present state of our knowledge, be a matter of doubt, but we must confess our disappointment with this section, and its perusal leads rather to the conviction that the author is not sure himself as to what is the best thing to recommend.

This third edition confirms the opinion we have previously expressed about this work, that it is well written and in the great majority of instances is a safe guide for the student. It is even better than the second, and many of the new figures are very good.

La Méningite Cérébro-Spinale. Par M. ARNOLD NETTER, Professeur agrégé à la Faculté de Paris, Médecin de l'Hôpital Trousseau, Membre de l'Académie de Médecine; et M. ROBERT DEBRÉ, Ancien Interne-lauréat des Hôpitaux de Paris. Fifty-four figures et three planches hors texte. Paris: Masson et Cie. 1911. Pp. 284. Price Fr. 8.

MODERN research has definitely established the pathological identity of epidemic cerebro-spinal meningitis and confirmed its dependence upon the activity of the diplococcus intracellularis meningitidis described by Weichselbaum as long ago as 1887. Recent work has been concerned more especially with its epidemiology, bacteriology, and specific treatment. These observations are timely, since there has been in recent years a recrudescence in the activity of this disease in many countries. The book now under review is a monograph upon this disease by two French authorities who have been themselves active in investigating it, but they give a very comprehensive and impartial account of the present state of our knowledge in regard to it, free from any personal bias. They have had especially in view the object of making their book useful to the practitioner, and therefore, although they give the views of other authorities, they do not give references in the text, but at the end of each chapter a historical and bibliographical appendix referring to the chief books and papers upon the subject under consideration is added.

The history of the disease is first related, and then considerations of epidemiology and its spread are fully set forth. The habitat of the meningococcus in the pharynx and the importance of healthy carriers in the spread of the disease are next discussed. The second section is devoted to the description of the meningococcus, its growth, biological reactions, and pathogenicity for laboratory animals. The identification of the organism and its differentiation from allied organisms are also described in detail. The third section deals with the clinical characters of the disease, its varieties, complications, course, and prognosis. The biological reactions employed in diagnosis and the characters of the cerebro-spinal fluid are also clearly described. In the fourth section the pathological anatomy and physiology of the disease are considered. This section is illustrated by coloured plates as well as by figures.

The question of treatment forms the subject of the last section. Under this heading a clear account is given of the value of the anti-meningococcus serum treatment and the technique of its administration. It is advised that the serum should be injected into the spinal canal after withdrawal of cerebro-spinal fluid, and that the injection should be made slowly and very gently. The authors advise 30 cubic centimetres as the ordinary dose even in young children, and state that in severe cases as much as 40 or even 60 cubic centimetres may be injected. After injection the patient should lie with the head very low for about 10 minutes; after that he should lie flat, with the foot of the bed slightly raised for some hours. The

importance of using the serum as early as possible is strongly emphasised, and instructions are given in regard to subsequent injections. The serum should be given daily for three or four consecutive days, and then if the cerebro-spinal fluid is free from organisms it may be stopped, otherwise the serum is to be continued.

M. Netter and M. Debré have produced a valuable monograph which is thoroughly practical and instructive.

La Pratique Neurologique. Publiée sous la direction de PIERRE MARIE, Professeur à la Faculté de Médecine de Paris, par MM. CROUZON, DELAMARE, DESNOS, GUILLAIN, HUET, LANNOIS, LÉRI, MOUTIER, POULARD, ROUSSY. Avec 302 figures dans le texte. Paris: Masson et Cie. 1911. Pp. 1402. Price Fr.30.

THE handsome volume before us, with its 1400 pages and its 300 illustrations, is a production of which any school might well be proud. It emanates from the active coterie of young neurologists who have been pupils of Professor Pierre Marie—under whose ægis the book has appeared—with the collaboration of three others—viz., MM. Desnos, Lannois, and Poulard—who have contributed articles on their own specialties. The general plan of the work is to provide a text-book of symptomatology of nervous disease, but the diagnostic and therapeutic aspects of the subject also receive full consideration.

Dr. Poulard opens with the nervous affections of the ocular and visual apparatus in some 120 pages, which are replete with practical hints and suggestions. Then come chapters on the ear, by Dr. Lannois, on vertigo, apoplexy and coma, insomnia, aphasia, apraxia, and agnosia. The next division of the work embraces the semeiology of psychiatrical affections and a chapter on idiocy. Sensibility is fully handled by Dr. Roussy in an article of about 100 pages. The reflexes, hemiplegia, associated movements, paraplegia, the diagnosis of medullary lesions, the semeiology of isolated muscular palsies and of cerebral palsies, muscular atrophy and hypertrophy, incoördination and its treatment, myasthenia, tremors, chorea, myoclonus, athetosis and tics, occupation neuroses, catatonia, and catalepsy are some of the chapters comprised in the section on motility. There are valuable chapters on affections of the gebito-urinary apparatus and on nervous disturbances of digestion. Adequate attention is given to radiology, the cerebro-spinal fluid, ventricular syndromes, electrotherapy, and hydrotherapy. In addition, we wish to direct attention to certain small but useful sections on the semeiology of the hand and the foot, on clinical anthropometry, on gigantism, infantilism, dwarfism, on the stigmata of degeneration, and on the stigmata of syphilis In these sections is embodied much interesting information which is difficult of access as a rule owing to its scattered nature. There is a final chapter on pathological technique, in which all the modern methods of investigation are concisely and accurately set forth.

Enough has been said to give the reader a general idea of the contents of this compendium, which aims at the presentation of modern neurological knowledge in an attractive and readable form. Considering the variety of the topics and the differing points of view from which they are approached very little overlapping has occurred. Detailed criticism of a work that has taken over five years to complete, and is the product of many minds, is scarcely called for in this place, although as the volume is studied a number of points on which amplification or modification is perhaps desirable have been noted. But, as a whole, we know of few treatises due to collaboration in which so uniformly high a level of scholarship is maintained, or where articles from different individuals are so uniformly readable and lucidly expressed. The diagrams, many of which are new, and the photographs are well reproduced; in fact, the typography leaves nothing to be desired. Notwithstanding the size of the book it is light and easy to handle. There is an adequate index.

We are confident that the merits of this splendid volume will be readily appreciated by all who are concerned, whether as specialist or as general physician, with the manifold phenomena of nervous disease.

A Junior Course of Practical Zoology. By the late A. MILNES MARSHALL, M.D., D.Sc., M.A., F.R.S.; and the late C. HERBERT HURST, Ph.D. Seventh edition. Revised by F. W. GAMBLE, D.Sc., Lecturer in Zoology in the University of Birmingham. With 94 figures in the text. London: Smith, Elder, and Co. 1912. Pp. 515. Price 10*s.* 6*d.*

IT is highly appropriate that Professor Gamble should continue the succession as editor of this, the seventh, edition of Milnes Marshall's well-known work, which after Marshall's death was edited by Dr. Herbert Hurst, whose drawings still serve to illustrate its pages. The first edition dates from 1886.

There is little alteration in the general text, but a new chapter has been added to meet the need of those who attempt elementary embryology in their junior course—the chick being chosen, although it is open to the same criticism that applies to many other accessible and convenient types of animal life, that it is a highly modified, and not a primitive, example of its division. Its practical convenience, however, is very great. In the introduction the student is told that "all animals should be carefully observed alive," and suddenly, three lines further on, he is introduced to the "odontophore of a snail and the scaphognathite of a crayfish." As to the killing of animals, we are told that "three or four minutes' immersion (in chloroform) is sufficient for small animals." It might be well to state that the vapour also is used. The whole work is based on certain selected types of animals from amœba upwards, so that many microscopical details are included, as well as descriptions of naked-eye dissections. Few medical students have sufficient time to master such a mass of details as are here presented. In this connexion we might cite the elaborate details of the astacus or the crayfish, or the elaborate details of the skull of a dogfish. A whole chapter of 72 pages is devoted to the dogfish, while two chapters, or over 100 pages, are given to the rabbit. Details of vertebræ are given almost with as much care and detail as obtains in a text-book on human anatomy. Over 60 pages are allotted to the fowl. The added chapter on the development of the chick is short and practical. The work maintains its elaborate and thorough descriptions of the types selected. In these days some teachers of zoology would prefer to be left freer in their selection of animals to be dissected. We do not find any observations on such important disease-producing organisms as trypanosomes, though such parasitic forms have long been known in the blood of vertebrates from fish upwards.

The work will prove most useful to students who wish to follow a zoological career, and may be consulted with profit by medical students preparing for the higher examinations in zoology.

LIBRARY TABLE.

My System: Fifteen Minutes' Work a Day for Health's Sake. By J. P. MÜLLER Illustrated. Third edition. London: Ewart, Seymour, and Co Pp. 92. Price 2*s* 6*d.* net.—The author was formerly lieutenant of Royal Engineers in the Danish Army. He subsequently practised as a private

engineer and was then inspector of the sanatorium for consumption in Jutland, but has latterly devoted himself to the study, practice, and teaching of personal hygiene and physical culture. As an all-round amateur athlete, also, it would seem that he is well qualified to instruct the public on rational athletic exercises. His chief aims are to promote: (1) the function of the skin; (2) the action of the lungs; and (3) the digestion; the principles being the breathing of pure air, with, of course, the open bedroom window; systematic breathing exercises; the regular habit of a cold or lukewarm bath; and the carrying out of the special exercises designed to bring into play all the muscles of the body harmoniously, and not to exaggerate certain special groups of muscles "for effect." There are obvious resemblances to the Swedish system of gymnastics, but there are also very many characteristic exercises of Lieutenant Müller's own system which appear to be rational and not difficult. He only demands 15 minutes in the morning and 5½ minutes every evening, but insists that it is daily exercise for a short time rather than longer periods once or twice a week that will produce the best results. A large number of photographs make the directions easy to be followed without any personal instruction. The translation, by G. M. Fox Davies and H. R. Murray, is in good English.

The Way with the Nerves. By JOSEPH COLLINS, M.D., Physician to the Neurological Institute of New York. London and New York: G. P. Putnam's Sons. Pp. 313.—This book is a compilation of letters, written to a neurologist, on various nervous ailments, real and fancied, prominence being given to conditions which are supposed to owe their origin to the developments of modern civilisation. To these letters the replies from the neurologist are appended, his advice being designed to supply effective treatment for the various typical neuroses that have been detailed. The book belongs to a class which we do not, as a rule, review in THE LANCET—that is to say, it is one which aims at providing the public with medical advice and suggestions for treatment, which they might use, to their probable detriment, without applying to a practitioner—though we do not suppose for a moment that such conduct is what Dr. Collins has intended to facilitate. There are counsels contained in the replies which might certainly be of value to neurotic subjects or to those in charge of them, but the manner in which the neurologist clears up the difficulties of his patients is not one which would often be of service in real life in this country. This is because the letters appealing for advice are not themselves, perhaps, always genuine documents; sometimes the questions appear to have been framed with the intention of providing the neurologist with an opportunity of making certain suggestions. If this has occurred it would account for the air of unreality which pervades the correspondence.

The Prescribing of Spectacles. By ARCHIBALD STANLEY PERCIVAL, M.A., M.B., M.C. Cantab., Senior Surgeon to the Northumberland and Durham Eye Infirmary. Illustrated with diagrams. Second edition, revised. Bristol: John Wright and Sons, Limited. London: Simpkin, Marshall, Hamilton, Kent, and Co., Limited. 1912. Pp. 168. Price 5*s.* 6*d.* net.—We reviewed the first edition of this excellent little work so recently as Nov. 12th, 1910, and but little need be added to what we then said. The present edition includes several new paragraphs and two more tables, one giving the values of various metre angles, the other the focal distances in inches and centimetres of different lenses. The regulations for the Services, in the Appendix, have been made as complete as possible. In cordially recommending the book in our previous review, we expressed the hope that it might be more widely studied than we feared likely would be the case. The appearance of a second edition in so short a time justifies the hope rather than the fear.

Bacteria as Friends and Foes of the Dairy Farmer. By WILFRID SADLER. With eight illustrations. London: Methuen and Co., Limited. 1912. Pp. 112. Price 1*s.* 6*d.*—The general public hears a great deal nowadays about bacteria as sources of disease, but it is safe to say that but a very small proportion of it is aware of the extent to which we are all dependent on microbic action in the preparation of many industrial products, and still more in the preparation of foods. Even the dairy-farmer, whose business it is to utilise and control microbic action, is for the most part ignorant of the nature of the forces that influence the quality of the milk and the making of butter and cheese, and of the myriad sources through which disease germs may gain access to these foods and render them poisonous instead of life-giving. This is the information that Mr. Wilfrid Sadler gives in his little book from the combined point of view of the scientist and practical dairyman. The book deserves a wide circulation not only among producers, but among consumers also, for it is only when the consumer is sufficiently instructed to demand what he ought to have that the producers as a whole can be relied on to take all the precautions necessary to secure it for him.

The British Red Cross Society First-Aid Manual. No. 1. By JAMES CANTLIE, M.A., M.B. Aberd., F.R.C.S. Eng., V.D. London: Cassell and Co., Limited. 1912. Pp. 219. Price 1*s.* net.—This is Manual No. 1 of a series of three prepared by Mr. Cantlie at the request of the Council of the British Red Cross Society. No. 3 was reviewed in THE LANCET of Feb. 3rd. The information contained in the present book forms the basis of all Red Cross work. It consists of so much anatomical and physiological information as is an essential pre-requisite for affording efficient first-aid in emergencies, with directions for applying it in the emergencies themselves. There is an elementary chapter on the transport of injured persons, a subject which, with others akin to it, is dealt with more thoroughly in No. 3 Manual. An introductory note gives a descriptive account of the work and objects of the British Red Cross Society. The technical information given in the body of the work is sound, and is couched in such language and expressed so clearly that any intelligent person should find it easily understandable. The book is adequately illustrated with 123 cuts. The ready methods of arresting hæmorrhage are well described and figured. The book can be highly commended to all seeking instruction on the subject.

MISCELLANEOUS VOLUMES.

IT is a sign of grace when members of the medical profession are moved to dedicate some part of their leisure to the Muses in this matter-of-fact age. In *Psyche and Other Poems* (London: G. Bell and Sons, Limited. 1912. Pp. 116. Price 2*s.* 6*d.* net.) Dr. Augustus H. Cook woos Erato (and occasionally, as in "The Confession," Melpomene) with some success, albeit unequal. In "Procrastination" the author takes a more didactic vein, and warns us in really powerful lines against Britain's unpreparedness for war.——In *Nursery Rhymes*, illustrated by F. M. Wiloish (London: George Routledge and Sons, Limited. Pp. 95. Price 3*s.* 6*d.*), it is naturally not the rhymes, but the illustrations, that are original. We miss some old friends, but the 29 that are given will doubtless serve to wile away the tedium of the little ones when convalescent from their infantile disorders. The illustrations are somewhat unequal, but many are very attractive.——It is hard for the medical man to take the "Science of Palmistry" seriously or to realise that intelligent and cultivated persons

can be gravely in earnest about it. Yet a perusal of *The Graven Palm, A Manual of the Science of Palmistry* (London: Edward Arnold. 1911. Pp. 328. Price 10*s.* 6*d.* net.) makes it obvious that the author, Mrs. Robinson, who certainly writes like a person of intelligence and culture, is very much in earnest. Inasmuch as, according to her own statement, she numbers amongst her clients "all ranks and classes from royalty downwards," other cultivated and intelligent people also besides herself appear to take her "science" seriously. That the hand to some extent discloses character is possibly true, and in so far as probable future events are linked up therewith some good guessing may undoubtedly be done by those who are constantly studying the matter; just as a clever student of facial expression before physical examination can often diagnose with more or less accuracy certain morbid conditions. But the "science of palmistry" claims much more than that. Those who desire kindergarten instruction in medicine may be interested to learn that among the things that may be (at least, sometimes) diagnosed from the condition of the "line of health," according to Mrs. Robinson, are lunacy, neuritis, heart disease, congestion or inflammation of the lungs, pleurisy, typhoid fever, internal tumour, cancer, rheumatic fever, hysteria, dipsomania, habituation to drugs, paralysis, deafness, blindness, asthma, liver complaints and indigestion, and much more. Mrs. Robinson, anticipating criticism, says: "Of course, the best palmists make many mistakes and miscalculations; but do not clever doctors do the same? I know a lady who is at the present moment strong and well, who was told ten years ago by an eminent specialist that she could not live more than two years." The study of palmistry does not appear to help the faculty for logic.

JOURNALS AND MAGAZINES.

Biometrika: a Journal for the Statistical Study of Biological Problems. Edited by KARL PEARSON. Vol. VIII.: Parts III. and IV. January, 1912. Cambridge: The University Press. Price 20*s.* net.—This issue contains some articles of varying anthropological interest as well as a vast amount of work relating to wider biological problems. H. Dorothy Smith contributes a paper on the occasional persistence of the synchondrosis condylo-squamosa, and one unfortunately entitled "A Study of Pygmy Crania, based on Skulls found in Egypt." To the anthropologist a pygmy cranium means something definite, and it is a pity for the biometrician to use this nomenclature to indicate any skull which is undersized. Presumably the author thinks the skulls are those of a pygmy race, for their comparison is made to the Akkas and Andamanese, and the paper certainly leads the reader to suppose that a review is made of the crania of a pygmy race from Egypt. There is, however, a choice between "infantile dwarfism" and "ethnic dwarfism" which the author has not reckoned with. Egyptian skulls ranging from the third dynasty to Christian times have been examined, and among this wealth of material the author has found some few individuals who were undersized. These undersized skulls present few features in common save their smallness; they are of different facial and cranial type, and all their varying features are well seen in the normal-sized crania of similar periods and localities. It is difficult to appreciate the utility of an exhaustive tabulation and comparison of the measurements and indices of these skulls, and it is certainly a very doubtful service to anthropology to describe as "pygmies" those individuals who merely fall short of the normal standard of size. The paper is beautifully illustrated by photographs. The Study of the Negro Skull commenced by the late Dr. Crewdson Benington has been completed for publication by Karl Pearson, and it contains details of the Batetela skulls obtained in the Congo Free State by Mr. Torday in 1909. Notes on the Pigmentation of the Human Iris, by A. Rudolf Galloway, controverts the conclusions of Hurst, that iris pigmentation of human eyes is distributed in anterior and posterior zones. The actual distribution is shown in microscopic sections, and the author concludes that the classification of "duplex" and "simplex" eyes is erroneous. Captain H. W. Acton and Major W. F. Harvey contribute a study of the Increase in the Number of Erythrocytes with Altitude. The Relation of Stature and Weight to Pigmentation is dealt with by Ethel M. Elderton; and Pigmentation in Relation to Selection and to Anthropometric Characters by A. M. Carr Saunders. Karl Pearson contributes a paper on the Appearance of Multiple Cases of Disease in the Same House; and J. McD. Troup and G. D. Maynard discuss the same subject in a study of the Extent to which the Distribution of Cases of Disease in Houses is Determined by the Laws of Chance. An interesting preliminary study, by Dr. J. W. Jenkinson, deals with the growth of young trout. The issue also contains several more strictly mathematical contributions and a large collection of Miscellanea.

NEWTON ABBOT (DEVON) WORKHOUSE INFIRMARY.—The extension of the Newton Abbot Workhouse Infirmary was formally opened last week. The additional building consisted of two wards, and will provide accommodation for 60 patients. The cost of the undertaking has been about £3500, which includes the cost of furnishing.

THE ROYAL SANITARY INSTITUTE.—The Twenty-seventh Congress of the Royal Sanitary Institute will be held at York from July 29th to August 3rd under the patronage of Prince Arthur of Connaught. In the Section of Sanitary Science and Preventive Medicine, of which Sir Shirley F. Murphy is the President, papers will be read by Dr. J. Knight, Dr. A. Mearns Fraser, and Dr. D. J. Williamson. Mrs. M. Scharlieb will preside over the section devoted to the Hygiene of Infancy and Childhood, and a paper will be read by Dr. Lewis Williams. In the Industrial Hygiene Section, presided over by Sir Thomas Oliver, papers will be read by Professor J. M. Beattie and Professor F. W. Eurich. At the conferences Professor A. Bostock Hill will preside over the medical officers of health, and amongst those announced to take part in the discussions are Dr. John Brownlee and Dr. George Reid. The popular lecture will be delivered by Professor H. R. Kenwood. Full particulars regarding the Health Exhibition which will be held in connexion with the Congress can be obtained from the secretary of the institute, 90, Buckingham Palace-road, London, S.W.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin:* Dr. Ludwig Händel, of the Imperial Sanitary Service, has been granted the title of Professor, and Dr. Ulrich Friedemann, of the Institute of Infectious Diseases, has been appointed Bacteriologist to the Moabit Hospital in place of Dr. A. Schütze, who recently lost his life in Tripoli.—*Düsseldorf (Academy of Practical Medicine):* Dr. O. Pankow, of Freiburg, has been offered the Directorship of the Gynæcological Clinic in succession to Dr. Opitz.—*Greifswald:* Dr. Sophie Herzberg has been appointed Assistant Physician in the University Clinic for Women.—*Jena:* Dr. Gustav Hesse, of the Odontological Clinic, and Dr. W. Busse, *privat-docent* of Gynæcology, have been promoted to the rank of Extraordinary Professor.—*Kiel:* Dr. Wehrsig, of Breslau, has been appointed Prosector.—*Königsberg:* Dr. F. Schieck, of Göttingen, has been appointed to the chair of Ophthalmology in succession to Dr. Krückmann, who is going to Berlin.—*Modena:* Dr. Pio Colombini, of Cagliari, has been appointed to the chair of Dermatology.—*Zürich:* Dr. Zangger, Extraordinary Professor of Forensic Medicine, and Dr. E. Feer, Extraordinary Professor of Pædiatry, have been promoted to the rank of Professor.

THE LANCET.

LONDON: SATURDAY, APRIL 20, 1912.

Report for 1910 of the Medical Officer of Health of the Administrative County of London.

WE have received from the London County Council Vol. III. of its recently issued annual report, which contains, *inter alia*, the report of the county medical officer of health and the report of the medical officer (education) for the year 1910. The reports of these officers for the previous year were issued independently, but it will be remembered that last year, when the approaching retirement of Sir SHIRLEY MURPHY was under consideration, a new administrative policy was adopted by the Council after prolonged consideration by its special committees. This policy, which has always been cordially approved by THE LANCET, consists in placing the whole education medical service under the control of the county medical officer of health. Dr. W. H. HAMER will therefore be directly responsible for the direction of the entire public health system of the metropolis, including as of prime importance the giving of advice concerning the medical examination, as well as the subsequent treatment of school children. This timely and far-reaching decision will inevitably involve the reorganisation of the Public Health Department, and will probably entail considerable changes both in the official relations of the medical members of the staff and in the form in which official reports will in future appear.

The present is the nineteenth annual report that has been issued by Sir SHIRLEY MURPHY in the course of his long and distinguished tenure of office. In its general arrangement it does not differ materially from its recent predecessors, any changes being mainly of the nature of development. With the help of data obtained from the recent Census the various rates in the tables have been re-calculated, and may therefore be accepted as reliable. Re-calculation has been especially necessary in the case of the smaller statistical divisions, where the movements of the population are exceptionally liable to fluctuation within short intervals of time, and where, consequently, the ratios of natality and of mortality at long distances from the Census can hardly be regarded as useful approximations to the truth. As in previous years the vital statistics of the metropolis are skilfully analysed in the present volume, and in future issues of this journal we hope to consider them in some detail. The frequent use of diagrams continues to be a prominent feature in this section, and the application of the life-table method is still enjoined as the only true measure of the saving of human life on the one hand, or of the success of sanitary administration on the other. In another section special attention is directed to the adverse influences still at work in fostering the prevalence of tuberculous and other diseases which shorten the lives and impair the vitality of wage-earners. And in this connexion we gladly recognise the assiduity with which the Council maintains its campaign against contamination of the milk-supply that comes to London from the provinces.[1] The carefulness with which, under special Parliamentary powers, the Council investigates the origin of particular instances of contamination is deserving of all praise and encouragement; every tuberculous milk sample is now traced to its source in the milch-cow from which it is derived, although the dairy implicated may be, as it often is, outside the Council's jurisdiction. Far from pleasant reading is the medical officer's statement that out of about 5000 samples of milk consigned to London dealers during the last two years rather more than 10 per cent. were found to contain tubercle bacilli. In view of the declaration of the Royal Commission on Tuberculosis as to the seriously infective nature of tuberculous milk, it is hardly necessary to look beyond this startling statement for the explanation of much of the human tuberculosis which is still present amongst us. The records of 1910 show a further marked decline in the loss of life from tuberculous phthisis. This disease has been declining in London for at least 40 years, during which period the decline has been equal to about 60 per cent., and this not apparently as the result of effort specially directed to its suppression. Study of the behaviour of this disease in relation to social condition once more emphasises the conviction which we have often expressed, that it is the poorer classes for the most part who suffer from the ravages of consumption.

For many years past attention has been directed to the remarkable tendency of school attendance to aggravate in certain circumstances the spread of infectious disease among children above and below school age, as well as among those in actual attendance at school. Sir SHIRLEY MURPHY once more returns to this subject and re-affirms his oft-stated conviction as to the reality of holiday influence as a governing factor in this connexion. He also gives particulars respecting the behaviour, not only of the diseases that are compulsorily notifiable, but also of such infantile scourges as measles, concerning the occurrence of which the sanitary authorities are dependent on information furnished by elementary school teachers. From the educational standpoint the necessity for aggregation of children in schools hardly admits of question. The lesson taught by past experience would appear to be that groups or classes of school children should be kept as small as possible, so that in times of special prevalence of infectious sickness in a locality exclusion from school, as a preventive measure, might be limited to the smallest possible aggregate of presumably susceptible children. The fact that in his closing report Sir SHIRLEY MURPHY should recur in so important a manner to a theme which 12 and 15 years ago he regarded as one of the first significance in preventive medicine illustrates well how

[1] THE LANCET, April 13th, 1912, p. 1013.

steady is the sequence of ideas with a man of a truly comprehensive grasp; and we wish to place on record our opinion that this last volume forms a fitting conclusion to his series of essays on the sanitary progress of Europe's greatest city, progress which is without a rival in the history of this or any other country.

Hospitals and Hospital Funds.

THE two great Hospital Funds for London, the King's Fund and the Metropolitan Hospital Sunday Fund, represent in their capital a very large sum of money contributed by the eleemosynary public, alive and gone, and by their annual receipts prove that the spirit of charity still shines among us with undiminished radiance. Any factor which influences the just employment of such money is a subject of public concern as well as a matter of particular interest to the medical profession, so many of whose members are engaged in carrying out the work for which these Funds help to provide. Our attention is thus inevitably arrested when we find the King's Hospital Fund for London and the Metropolitan Hospital Sunday Fund, through their executive officials, arriving at strictly diverse conclusions upon the same questions, and, we believe, with the same evidence available for their assistance. We allude, of course, to the attitude of the two Funds towards St. George's Hospital, the King's Fund having decided to withhold its annual grant because of the manner in which the funds of the hospital are employed, and the Hospital Sunday Fund, after inquiry into that manner, having made the usual subsidy. We do not propose at this moment to enter into all the minutiæ of hospital accounts, but we believe that it is possible to give the broad outlines of the situation so that our readers can understand it, and either relieve our feelings of misgiving or make clear the unnecessary nature of those sensations.

At the meeting of the King's Hospital Fund for London in December, 1910, the grant which had in previous years been awarded to St. George's Hospital was withheld until the figures of the expenditure of the hospital in respect of 1909 and 1910 could be regarded as "clear from any payments on account of medical education." The hospital, through its treasurer, Mr. A. WILLIAM WEST, consequently presented a detailed account of the expenditure of the money received, showing that, in the opinion of the hospital authorities, no payments were being made from the general funds of the hospital except for work done directly in the interests of the patients of the hospital. The King's Fund perhaps did, and perhaps did not, agree with the representations of the hospital, but at any rate the ground was shifted and the refusal of the grant maintained for a different reason—viz., that at St. George's Hospital more money was spent in the bacteriological and pathological departments than the average returns from other hospitals warranted. To this allegation the hospital replied, and still replies, that if the officials of the King's Fund will go properly into detail in their examination of the figures of expenditure, it will be found that the money spent in the incriminated departments of St. George's Hospital is within the average of that spent by other hospitals of similar size and educational standing.

The contention has been raised by the hospital that fair comparisons of cost per bed at different hospitals cannot possibly be made unless a really thorough investigation is held, one which takes into its purview all kinds of expenditure, such as the cost of laundry and certain items of the board of patients, for the expenditure on these is differently managed at different hospitals. Some institutions, of which St. George's Hospital is one, supply the patients with absolutely everything; others require patients to bring with them certain articles and to provide themselves with certain accessories. Obvious and considerable differences in the cost per bed arise in this manner. Further, in comparing the financial statements of different hospitals we have to reckon with, or should reckon with, the existence of discretionary funds which exist alongside with general funds at some hospitals dependent for their support on public charity. Money taken from discretionary funds is, so to speak, spared from the general funds, and the apparent cost per bed can thus be lowered. The authorities at St. George's Hospital contend that they have throughout acted strictly in accord with the findings of the Fry Commission and with the recommendations of the King's Fund. Although the cost per bed at St. George's Hospital may be higher than that at other comparable institutions, this excess is due to administrative and other reasons, and not because the expenditure on the pathological and bacteriological departments is in excess of the average. Where the same scrupulous care is not taken to charge to the general funds every penny spent upon the welfare of the patients, whether that penny is spent upon food, dressings, and remedies, or upon pathological, bacteriological, and electrical departments, a false comparison will be instituted. In 1911 the hospital, seeing no straightforward way of altering its attitude, forewent the grant.

Owing, perhaps, to the action of the King's Fund, the Metropolitan Hospital Sunday Fund last year took the position of St. George's Hospital into serious consideration, and as a result the question of a grant from the senior fund was left open until the allegations against the institution of financial profligacy had been made the subject of a report by Sir THOMAS CROSBY, who is at once Lord Mayor of London, a physician, and the President of the Metropolitan Hospital Sunday Fund. The Lord Mayor reported that a careful investigation of the whole matter had convinced him that, in the departments of bacteriology and pathology at the hospital, work recognised at all efficient institutions as essential to the scientific diagnosis and treatment of disease was being done, and that the amount expended upon this work was in no way excessive. The Metropolitan Hospital Sunday Fund accordingly allowed the grant. We publish in another column this report, which, having had the figures upon which it is based produced to us, we are able to endorse. The difference of attitude in those responsible for he management of these two great agencies, the King's Fund and the Metropolitan Hospital Sunday Fund, towards the same important charity is so marked that we think it right to draw attention to it; the public importance that must attach to such discrepancies in judgment makes it necessary to discuss them, and we trust that

it is possible to do so without appearing to challenge the good faith of the administrators. The administrators of these funds have, indeed, grave responsibilities, which in our view, and surely in theirs, are not fully discharged by the mere distribution of money upon some principle which they believe to imply a fair division of available sums amongst the various claimants. This is in itself an obligation heavy enough, but trust funds are in question, and the reason for any action taken should be justified up to the hilt in a public manner.

In the particular situation between the King's Hospital Fund and St. George's hospital the medical profession, no less than the charitable public, have been left much in the dark. The principle upon which the actions of the executive of the King's Fund are based is not clear; though subscriptions are invited from all, it is not open to all to understand the action of the Distribution Committee of the Fund. This is dangerous. We feel sure that public confidence would be increased—or perhaps we should say that the confidence, now great, would become entirely unassailable—if the reasons for such drastic action as the withholding of a grant from a hospital were made public as a signed report. We have here the case of a large hospital which prefers to forego a grant rather than comply with demands which are not only contrary to the principles approved of by the charity, but which also seem to traverse the rulings of the Fry Commission. Such a state of affairs is not satisfactory. It may quite well be impossible for the executive of the King's Hospital Fund to have clear-cut rules for the distribution of its trust money, but there should not be any chance of suspicion that the scheme, whatever it is, can be made to operate more hardly in one direction than another, and this without full explanation to the public which provides the money. Every hospital doing good work, which fails in its application to secure a grant, is a criticism upon the distribution of the Fund that is only justly destroyed when the Fund has shown sound reasons why, in spite of the good work, the grant is not earned. The King's Fund, like the Metropolitan Hospital Sunday Fund, stands for that element of order in charity which all who know anything of a vast subject feel is sadly needed. The value of its work is beyond doubt; the sincerity and self-sacrifice of its voluntary executive are unquestionable, and here unquestioned; but the relations of the Fund to St. George's Hospital should certainly be made the subject of public explanation.

Arsenic and Murder by Poisoning.

THE trial of FREDERICK HENRY SEDDON and MARGARET ANN, his wife, for the murder of ELIZA MARY BARROW ended in the conviction of the former prisoner and the acquittal of the latter, after a trial lasting ten days at the Old Bailey, and following upon inquiries before the coroner and magistrate which extended over many weeks. An appeal against the verdict has failed. The death of Miss BARROW took place on Sept. 14th, 1911, and the trial of the SEDDONS ended upon March 14th last, full particulars of the evidence having been reported so constantly in the newspapers that it is not necessary to recapitulate the story here. Medical men who read the evidence of Dr. WILLCOX and Dr. B. SPILSBURY will have observed that it proved facts essential to the prosecution, failing which not even a *primâ facie* case could have been made out against SEDDON; but at the same time neither their evidence, nor that of the other medical men called, connected him with the administration of arsenic to the deceased, or showed more than the facts, essential as they were, that the deceased died from arsenical poisoning, and that if fly-papers of a certain kind are in a man's possession it is easy for him to extract from any one of them a poisonous dose of arsenic. The process of steeping them in hot or cold water was not proved to have been undertaken by the prisoner, nor was it shown that he possessed knowledge likely to suggest such a course, but the obvious nature of the operation was matter for the jury to consider, the fact of its possible effect being before them. The links connecting the prisoner more directly with his crime were supplied rather by his own proved conduct, his squalid greed, his indifference to the suffering of the dying woman, and his attitude towards her relatives. It must have been, however, a matter of considerable anxiety to the defence to feel compelled, while denying the purchase of arsenical fly-papers by the prisoner's daughter for the purpose of murder, to admit their presence in the house for the destruction of flies. Without such evidence, however, there could have been no suggestion such as was made, that Miss BARROW might have accidentally drunk the water in which fly-papers had been steeped, four at a time, in a soup-plate—that is to say, there could have been no explanation of any means whereby arsenic could have entered her body during life in the quantities revealed by post-mortem evidence. As to that evidence, and the manner in which it was treated by counsel for the defence, little need be said. Scientific tests for the detection of poison and for estimating the amount absorbed by a particular person, the time at which it was so absorbed, the method of its administration, and other important particulars, become constantly more detailed and more conclusive. The elaborate nature of the tests used, however, and even the precision claimed for the deductions made from their results, not unnaturally supply material for the advocate which it is his duty to make use of when criticising evidence vitally affecting his client. If a process is of so subtle a nature, he reasons to the jury, may not a fundamental error as to the deductions to be drawn from observed facts, or in the application of a test, affect the result when a minute quantity of a poison is alleged to be present in a small portion of a human body, and may not that error vitiate the whole proceeding? It is right that every such possibility should be raised by counsel addressing a jury on behalf of a prisoner, and Mr. MARSHALL HALL in his able defence of SEDDON did this, paying a tribute at the same time to the fairness and ability with which the scientific evidence had been presented by the witnesses for the Crown.

After all, however, the circumstances and the result of the SEDDON trial, so far as they affected the prisoners, are of less importance to the public and of less interest to the medical profession than the fact that in a case in which a person

unquestionably died from arsenical poisoning the body was buried in due course upon the strength of a medical certificate assigning a natural cause of death, and that it was only owing to the suspicions aroused in, and expressed by, relatives of the deceased that the actual cause was established. Not many months ago, it will be remembered, EDITH AGNES BINGHAM was tried for the triple murder of her father, sister, and brother at Lancaster Assizes and acquitted. In that case, also, arsenical poisoning was the undoubted cause of death, although the method of its administration was not proved, and the responsibility for its administration was not brought home to the person accused or to anyone else. In that instance it was suggested that as arsenic in the form of a weed-killer had been in the possession of the deceased father, a member of his family might easily have obtained sufficient for the killing of the three persons who had died from the poison, although none was traced into the hands of the accused. Other examples might be given of arsenical poisoning, felonious or otherwise, which have drawn attention to the ease with which this deadly substance can be obtained and made use of by criminals without detection. Arsenic, used as a weed-killer upon garden paths and other spaces which it is desired to keep free from vegetation, is extremely useful in view of the increased cost of male labour and the lessening employment of women and children for such purposes as pulling up weeds by hand. The Poisons and Pharmacy Act, 1908, substituted a fresh and ampler schedule of poisons for Schedule A of the Pharmacy Act, 1868; but while arsenic and its medicinal preparations have remained subject to the close restrictions imposed upon the substances included in Part I. of the new schedule, arsenic incorporated in a weed-killer has ceased to be more or less exclusively the merchandise of the pharmaceutical chemist. It may now be sold, subject to restrictions and regulations, by a person duly licensed for the purpose by a local authority; or, in other words, a nurseryman can lawfully sell at one deal to a single customer enough arsenic for the destruction of hundreds of lives. It would not now be easy to restrict to any great extent the sale of arsenical weed-killers, but every means should be taken by persons purchasing it to prevent its passing into the hands of careless or otherwise untrustworthy agents, and every care should be used to remind the purchasers of this duty. The use of fly-papers has diminished during the past few years, and the prevention of the prevalence of flies is likely to take more and more the place of their destruction after they have attained maturity. The presence of arsenic in a certain class of fly-papers has been abundantly advertised by the recent trial, as it was some years ago by the MAYBRICK case, and less can be said for the free sale of fly-papers containing arsenic than for the to some extent restricted and regulated traffic in weed-killers. May it not be suggested that without any appreciable hardship to anyone their sale might be forbidden?

Another feature of public and of medical interest in both the SEDDON case and the Lancaster case referred to above is undoubtedly the fact of certificates of the cause of death having been granted which were entirely erroneous. To censure a medical man because he does not suspect poisoning by a murderer in a case where the symptoms can be explained by natural illness is certainly unfair, and if the system of death certification is at fault it is the public and not the medical profession, either collectively or in its individual members, that should accept the blame. The system of death certification and registration which has been in use for many years has been pronounced unsatisfactory continually and emphatically by medical practitioners. If the public should demand, in unmistakeable terms, a better system, and one calculated to have as its result the detection of crime with greater certainty than now exists, the Legislature would no doubt institute reforms. The public, however, has made no move, possibly realising that under new regulations it must be prepared for methods of investigation being legalised which, in individual cases, would prove irksome and painful, and which would often be resented as oppressive and inquisitorial. For when the change comes it will not be confined to compulsory inspection of the body by the medical attendant who gives the certificate. Such inspection would have made no difference in the SEDDON case, and it is clear that in order to secure complete protection there would necessarily be inquiries made by independent medical officials (in some cases, if not in all), which sensitive relatives, already plunged in grief by the death inquired into, would regard as an unwarrantable intrusion upon their sorrow and almost as an official outrage. Privacy, however, and the absence of inquiry have as their result cases, rare no doubt, but perhaps not so rare as some would believe, where crime is undetected.

Annotations.

"Ne quid nimis."

THE DISASTER TO THE "TITANIC."

THE two English-speaking nations, and the world at large in sympathy with the United States of America and ourselves, lie under the horror of the disaster to the steamship *Titanic*. To no class of the community more than to medical men is it so continually present that the ultimate developments of mechanism and the completest scientific equipment avail little in the face of elemental catastrophe. God alone can comfort the afflicted, but man's generosity can do something, and that something must be done freely.

NATIONAL INSURANCE AGAINST SICKNESS IN RUSSIA.

FOLLOWING the example set by its Western neighbours, Russia proposes to introduce, at first on a limited scale, a scheme of compulsory insurance against sickness, and a Bill to this effect has already passed its third reading in the Duma and awaits discussion in the Imperial Council. The Russian measure will only affect factory workers, and differs in many particulars from the British or German systems of national insurance. In the first place, the owner of every industrial establishment is compelled to provide his employees with free medical attendance and free medicines; this obligation, however, is to extend only to ambulatory treatment, and the object of the Bill is to make proper provision for those workmen who are incapacitated for work and obliged to undergo treatment in a hospital, and are

therefore unable to provide the necessary funds for the maintenance of their families. A Central Insurance Board is to be formed empowered to take the necessary steps to give effect to the provisions of this Bill. The owner of every industrial establishment giving employment to more than 200 hands must form a sick club for the benefit of his employees. The total contributions may not exceed 2 per cent. of the worker's wage, and of this amount two-fifths are to be paid by the employer and the remaining three-fifths by the employee. In addition to this direct form of contribution, the funds of the sick club are to be augmented by the fines imposed upon the workmen in accordance with the rules regulating their work, and also those fines exacted from the employer for transgressing the factory laws will in future be paid into the sick club funds. When a sick club has exhausted its funds the employer will be compelled to advance, free of interest, a sum equal to three months' total contributions. In the case of financial difficulties the members of the club may voluntarily agree to pay a higher rate than established by law, while clubs with less than 300 members are empowered to levy a total contribution equal to 3 per cent. of the worker's wage, instead of the legal limit of 2 per cent. Establishments employing under 200 hands will be required to amalgamate with other smaller establishments in order to reach the prescribed number of 200 insured persons required to form a sick club. As mentioned above, the employer will have to defray out of his own pocket the entire costs of ambulatory treatment of his employees, and it remains for the sick club to make arrangements with the existing private or Government hospitals regarding the treatment of its members and the rate of remuneration. The cost of hospital treatment and sick pay to incapacitated members will form the charges to be met out of the funds of each club. In conjunction with the introduction of this form of compulsory insurance against sickness it is also proposed to organise a scheme of State insurance against accidents in the course of employment.

SAFETY AIR IN COAL MINES.

THE suggestion to reduce the proportion of oxygen in the air supply of coal mines appears, on the face of it, a startling one, and yet it deserves very careful attention, since while such air would not seriously interfere with respiratory activity, it would, so it is stated, render coal-dust explosions improbable. It is even claimed that in such air acetylene lamps could be employed for purposes of illumination without danger. Everyone must agree, and the subject has very forcibly been brought before us by the recent great coal strike, that an improvement in the conditions under which miners work is much needed. The whole process of coal mining from beginning to end is crude, but suppposed considerations of safety have produced the adoption of inefficient and even cruel methods. To quote one instance, we should like to see pony traction done away with altogether. It is a blot on civilisation surely to consign animal life to a career of unbroken divorce from daylight. Opinions, however, differ as to whether the supply of an atmosphere with a diminished proportion of oxygen, and perhaps a small percentage of carbonic acid gas added, would secure immunity from explosion under the varying conditions of the air of the coal mine. Even if security on this head could be given, the question whether it would be possible to maintain large volumes of specially prepared air always exact in regard to its safety of composition is by no means settled beyond doubt. And settled beyond doubt it would have to be before such a hazardous experiment was undertaken. It is true that candles or safety lamps are extinguished when the percentage of oxygen falls to from 17·6 per cent. to 17·1 per cent., and also that air containing that proportion of oxygen gas does not apparently interfere with the normal process of respiration, but the machinery giving such air to the ventilation shafts would have to be absolutely perfect and trustworthy as regards its standardising function. The smallest hitch occurring in such a machine might cost hundreds of lives in a very few minutes. Still, it is definitely asserted that coal mines could be made absolutely safe from explosions of dust and fire-damp and fires by reducing the amount of oxygen in the air to 17·5 per cent. But coal mines are big places, with many unforeseen possibilities in them, which, of course, is not the case with mere laboratory experimental chambers.

CONSULAR MEDICAL REPORTS FROM CHINA.

Dr. Douglas Gray, of the British Legation at Peking, has edited a summary of the medical reports from the various Consulates in China, which is of interest from an epidemiological point of view, as well as to those who are connected with or intending to visit the Far East. It is satisfactory to learn that among foreigners in China (that is, including all Europeans) the public health has been very good; also that among the Chinese in the central ports it has been fairly satisfactory. In the Yang-tsze Valley virulent epidemics of typhus and relapsing fever have prevailed among sufferers from the famine, due to floods that have been almost unprecedented. To this cause, bearing in mind that 80 per cent. of the inhabitants of China are tillers of the soil, Dr. Gray considers the existing political unrest to be chiefly due. There are four outstanding conditions, as Dr. Gray points out, necessary to ensure a proper state of public health: efficient drainage, pure water, isolation of infected cases and their contacts, and ventilation of dwellings. All of these are neglected in every Chinese city. The upper classes are still wedded to the Chinese "system" of medicine, little changed from its condition of a thousand years since; but it is noted that the lower classes are more ready to seek foreign medical aid. The steady increase in the demand for foreign (especially patent) medicines is being met by the Japanese rather than by British enterprise. The chief diseases that prevail endemically are intestinal parasites, tuberculosis, diarrhœa and dysentery, malaria, and venereal affections, in the order named. Reference is made to the outbreak on pneumonic plague, which raged in the northern provinces of Shantung and Chih-li, and in Manchuria, during the winter of 1910–11, and was grappled with energetically by the authorities, preparations being also made to deal with any recrudescence; bubonic plague, on the other hand, was not so prevalent as usual, and cholera was absent. Owing to the better sanitation of the various concessions typhoid fever was not a serious matter; but as it is undoubtedly endemic in the country preventive inoculation is strongly recommended for newcomers. Small-pox has largely diminished in the treaty ports, vaccination being appreciated. Typhus and relapsing fever have caused a number of deaths stated to be incalculable, the conditions under which they occur being at present beyond amelioration. Large expenditure of money is required for public works, to diminish, or prevent, the flooding of the Yang-tzse river that at present is uncontrollable; the appalling loss of life is a feature of increasing gravity. Dr. Gray points to the economic progress of Egypt that has followed on the expert management of the Nile as a striking object-lesson for China of the capabilities of scientific engineering. Wherever rice is grown malaria prevails in Mid and South China; the paddy

fields form breeding grounds for the mosquito which cannot be eradicated; preventive quinine treatment rather than mosquito extermination is therefore to be aimed at. The most important Chinese city in the empire is Canton, with a population of 2½ millions; the public health has been satisfactory except for the annual visitation of plague, which persisted all through the year; at the height of the epidemic in May the deaths were 200 daily. At Chin-kiang, on the Yang-tsze river, there was an epidemic of typhoid fever, originating among the refugees from famine-stricken districts. Dr. Urbánek notes that just before the outbreak there was an outbreak of sickness in dogs, first among Chinese curs, then among dogs kept by foreigners; he made seven necropsies, and found typical ulcerations in the ileum, infiltrated peritoneal glands, enlarged spleen, &c., "the typical pathological picture of typhus abdominalis." Death was due to septicæmia; all but one had perforation and peritonitis. Unfortunately, no cultures were taken from the spleen to prove the presence of Eberth's bacillus. It is stated that at Hankow, a crowded city on the Yang-tsze river, the health has been exceptionally good; a new system of water-supply, purified by sedimentation and filtration, has been introduced; paratyphoid fevers are common, and several cases were met with that gave agglutinations with emulsions of the organism of Mediterranean fever, although the symptoms were not characteristic of the disease. The health of Peking was good during the year under review, both in the Chinese and European communities; sanitation is improving, especially in regard to drinking-water and drainage. At Shanghai scarlet fever, which is practically unknown in the tropics, was introduced by foreign immigrants in 1900; as would be expected in the case of a recently introduced disease, against which evolution has not had time to develop any natural immunity, it has been of a virulent type; and this intensification has made it also more virulent to foreigners, among whom there was a case mortality of 21·8 per cent. Tien-tsin, which is the commercial capital of North China, and has now a population of over a million, enjoyed very good health; some sporadic cases of cerebro-spinal meningitis have occurred among the British and French troops in the autumns of the past three years, the origin of which has not been ascertained. It is noted that, although Tien-tsin is a great centre for wool and hide traffic, carding and sorting being carried on in local factories on a large scale, to prepare the material for export, yet human anthrax is almost non-existent. Particular attention has been paid to this matter in recent years on account of the heavy indictment against China, as the country of origin whence infected skins have arrived in England. Special attention is drawn to the occurrence of schistosomiasis, the first recorded case in a European having been noticed in the previous year's report. Three further European cases are related in the present report from Hankow by Dr. J. A. Thomson; all had bathed in shallow water shortly before the onset of the illness; eosinophilia is always pronounced. Among the Chinese it is said that whole villages are sometimes infected, lakeside dwellers being peculiarly liable to the disease.

THE VALUE OF TUBERCULIN IN PULMONARY TUBERCULOSIS.

THE discussion which recently took place at the meeting of the Therapeutical and Pharmacological Section of the Royal Society of Medicine, and which is reported in the current issue of the Proceedings of that society,[1] was useful as focussing attention on a subject of great practical importance. It was, perhaps, unfortunate that all the speakers were enthusiasts for the use of some form of this remedy, and that no one appeared to represent the sceptics who still undoubtedly exist. Yet this unanimity is an indication of the general feeling which is setting more strongly in favour of tuberculin treatment. It is always difficult to offer convincing proof of the efficacy of any remedy, and statistics, as was noted by more than one speaker, are often fallacious. We have to depend rather on the personal opinions formed by scientific observers who have extensively used the substance. The consensus of encouragement here afforded is noteworthy. There are, indeed, different schools of thought which advise different methods of procedure, as, for example, the disciples of Sir Almroth Wright, who advise minute doses given at considerable intervals of time, and those who uphold the continental method of administering larger quantities at shorter intervals, more in accordance with Koch's original ideas. Another question of importance is as to the advisability of giving tuberculin to patients in their own homes or in hospital out-patient departments, when it is impossible to keep the recipients under constant observation after treatment. It is possible that with care in the graduation of doses severe reactions can be for the most part avoided; nevertheless, the risk of such occurrences in persons who are away from medical care seems to make it advisable to avoid the use of tuberculin under such conditions as far as possible. The multiplicity of forms of tuberculin now prepared is in itself a source of confusion, and it is desirable that some authoritative opinion should be arrived at as to their comparative efficacy. That they differ in potency is certain. The view expressed by one speaker that "new tuberculin (T.R.)" was mild as compared with the old variety (T.O.), if confirmed by other observers, might suggest the use of the former at the commencement of a course and of the latter when some degree of immunity had been obtained. The superiority of preparations of "cattle" tuberculin (P.T.O. and P.B.E.) does not appear to be established. Finally, it may be well to lay stress on the foolishness of rigidly contrasting treatment by tuberculin and by sanatorium measures and weighing one against the other. Clearly, if both are good, the combination of the two is likely to be still better; and while suitable cases in a sanatorium should receive tuberculin, those who have the opportunity of enjoying the advantages of a sanatorium should not neglect this aid to recovery owing to a mistaken reliance on tuberculin alone.

[1] Proceedings of the Royal Society of Medicine, 1912, vol. v., No. 5, Therapeutical and Pharmacological Section, p. 55.

SPICES.

THE spices are a very interesting group of substances; they are the foundation of a considerable industry, they have their medical uses, and finally are of special importance in dietetics. Their value resides in their richness in aromatic substances and essential oils; strictly speaking, they are not foods, but often enough they are essential elements in the diet. Spices have been the subject of classic research, as, for example, in the clever and important investigation which Pawlow undertook as to the psychic influences of food and as to the value of zest in nutrition. Spices were shown to arouse appetite and to promote the secretion of the gastric juice, and the rôle they play therefore in dietetics is a very important one. The medicinal action of some of them is further of value. Allspice, for example, is used as an aromatic and has been successfully administered for flatulency or for overcoming griping due to purgatives, and occasionally it is reported that the oil gives relief in rheumatism and neuralgia. The medical uses of cinnamon are well known. Cardamoms are used in the form of a tincture as aromatic and stomachic, and they are also employed as a flavouring agent in curry powder, cakes, and

liqueurs. The applications of capsicum and the peppers generally are well known. Cloves are aromatic, carminative, and stimulant, and have been used in dyspepsia, gastric irritation, and in cases of vomiting in pregnancy. Oil of cloves is also a popular remedy for toothache. It has also its uses in microscopy as a preservative and for clearing sections. The uses of nutmeg are wide, vanilla has an enormous application as a flavouring agent, while turmeric enjoys a similar patronage on account of its bright yellow colour and pleasant musky flavour. We have not quite exhausted the series, but sufficient has been said to show how important a place the spices occupy in human affairs, and the recent publication of a book[1] upon the subject, which contains some very interesting details as to the cultivation and uses of spices, serves to refresh our memory with that fact.

MYELITIS AS A COMPLICATION OF ERYSIPELAS.

AT a meeting of the Société Médicale des Hôpitaux of Paris on Feb. 2nd M. Lesne and M. Françon reported a case of a very rare complication of erysipelas—myelitis. A woman, aged 53 years, was admitted into hospital on June 18th, 1911, with erysipelas of the face, which had begun at the internal angle of the right eye and had spread to the nose and whole of the face, excepting the chin. The temperature was 104° F., the general condition was good, and there was a trace of albuminuria. On the following days the disease spread to the neck and the scalp. On the 24th the temperature fell and the patch of erysipelas became paler. On the following days it disappeared, but the temperature did not fall to normal. The patient felt feeble and complained of pains in the back, which she did not well localise. They increased and radiated to the lower limbs. They were aggravated by movements, so that the patient maintained the dorsal decubitus position and sat up with difficulty. On the 30th the temperature rose to 101·5°, and during the night retention of urine, requiring catheterism, occurred. Obstinate constipation followed, and the pains extended to the upper limbs. The temperature oscillated between 100·4° and 102·2°. On July 1st there was complete flaccid paralysis of the right lower limb and almost complete paralysis of the left. In the upper limbs there was some loss of power. The knee-jerk and tendo Achillis reflexes were abolished on the right side, and much weakened on the left. In the lower limbs cutaneous sensibility was much blunted, especially to touch and heat. On the contrary, pin-pricks were well localised. In the upper limbs sensibility was almost normal. The pains, retention of urine, and constipation continued. After some days the calves and thighs showed diminution in size and consistence. Superficial bed-sores appeared on the buttocks and over the right great trochanter. In spite of attention they extended and another sore appeared over the sacrum. Eleven days after the onset of the paralysis the muscles and nerves of the lower limbs showed diminished excitability both to galvanism and faradism, but not the reaction of degeneration. On July 13th Babinski's sign, previously absent, was found on both sides. The bed-sores increased in depth and extent, there was hectic fever, the patient was much prostrated, but there was some improvement in the paralysis. The bed-sores extended to the bone and death occurred on the 27th. During life several lumbar punctures were made and yielded clear liquid containing fibrin, albumin, and numerous lymphocytes, indicating a meningeal reaction. The necropsy showed in the dorso-lumbar region infiltration of the subarachnoid cavity with fibrin and leucocytes, and in the cord disappearance of many of the nerve cells in the antero-external and antero-internal columns. Bacteriological examination of the blood during life and of the cord after death was negative. Spinal complications in erysipelas are exceedingly rare. In his thesis on the nervous complications of erysipelas (1895) Cruchet refers to an old observation by Gübler and Piorry on paraplegia two months after an attack of erysipelas. In 1879 Leyden described after an attack of erysipelas paralysis of the rectum and bladder, which lasted two years. In 1892 he reported two cases of disseminated myelitis due to the same cause. In contrast to erysipelas, myelitis has been observed much more frequently after various other streptococcic infections, and has been induced experimentally by inoculation of streptococci.

[1] Spices. By Henry N. Ridley, M.A., C.M.G., F.R.S., F.L.S., Director of Botanic Gardens, Straits Settlements. London: Macmillan and Co., Limited. 1912. Pp. 449. Price 8s. 6d. net.

MARCH AT HOME AND ABROAD.

IN all parts of this country the temperature in March was almost continuously several degrees above its average for the time of year, and the wind current, although often strong, was mainly in the south-west or west regions. Once or twice the wind went round to the northward in Scotland and the North of England, bringing passing showers of sleet and snow and sending the thermometer below the normal, but such visitations were very brief. In the metropolitan area the mean maximum temperature in the shade was above 50° F., the highest mean point, 53°, being recorded at Greenwich and Westminster. At Kew it was 52° and at Hampstead 51°. The night temperature was again higher at Westminster than in the outlying districts, the respective mean of the minimum readings being 38° at Greenwich, 39° at Kew and Hampstead, and 41° at Westminster. At all the metropolitan stations except Hampstead the shaded thermometer ascended to 60° or above on two or three afternoons, and hardly any frost was recorded at night even on the grass. As might be expected from the direction of the wind, rainy days were plentiful over the whole kingdom. In London there were only about ten days without a measurable quantity of rain, and in the western parts of the country there were less. At Hampstead the aggregate fall equalled 3·2 inches, but at Greenwich, the driest of the observing stations in the London area, it was no greater than 2·6 inches. Over the metropolis as a whole there was about an inch more rain than the March average. The sunshine, considering the frequent rain, was, however, fairly high for the season, many bright days being enjoyed over the country generally during the latter half of the month. The south-west of England was again relatively dull, but at Torquay the total number of hours of sunshine, while it was below the average, was slightly higher than during March of last year. In London the figure differed little from the normal. In the City the total number of hours (72) exceeded the average by two hours, and at Westminster, where the figure was 81 hours, it was 13 hours more. The suburban stations of Greenwich, Kew, and Hampstead were brighter, the figure being 92 or 93 hours. The humidity of the air was naturally greater than during a March with cold east and north-east winds, but it was, considering the mild south-westerly winds, not excessive; and in spite of the large aggregate rainfall the soil over the country generally was drier at the end than at the beginning. Owing doubtless to the general excess of temperature throughout the past 18 months or so the temperature of the sea-water round the coast was above the average figure, and the temperature of the earth both at 1 foot and 4 feet below the surface was considerably higher. On the Continent the temperature was about normal for the time of year and the weather rather wetter than usual. At Paris rain fell on 14 days, and the total amount was little less than in London, while the sun shone for 104 hours, or for six hours less than at Torquay. The

days were warmer than in London, the mean maximum being 56°, but the nights were rather colder than at Westminster. In the south-west of France, at Biarritz, there were 16 days with rain, and owing to frequent strong winds from west and north-west the warmth was barely up to the March normal. At Biarritz the average afternoon had a temperature of 59° or 6° above the mean at Westminster and Greenwich, while the mean night temperature was also 6° higher than that at Westminster. On the Riviera there were some heavy downpours of rain, but they were not frequent enough to spoil the pleasure of outdoor life. At Nice the total rainfall was no less than 8·4 inches, but it all fell on ten days, leaving 21 days bright and sunny. The Riviera generally was a little warmer than Biarritz during the day and a little colder at night. In Italy and the various islands of the Mediterranean the temperature underwent a fairly gradual increase, until towards the end of the month it became quite springlike. During the early days the thermometer had considerable difficulty in rising to 60° at all regularly, but finally it marked readings about as high as those of a fine May in England, the figure of 70° being reached on several occasions and sometimes surpassed. Rain was not uncommon, but the wet periods were mostly brief and separated by many days of fair or cloudless weather. In Algeria spring became thoroughly established. Day after day the shaded thermometer rose to some point between 65° and 75° on the coast and to a higher figure inland. Rain was seldom experienced, and the sky was much more often clear than cloudy. So far as the climate of the coast of Algeria can be compared to that of this country it resembled a fine early June in the south-east of England.

INTESTINAL PERFORATION IN CONVALESCENCE FROM TYPHOID FEVER SIMULATED BY PNEUMONIA.

THE fact that it is easy to mistake thoracic for abdominal disease was known to the older physicians, but was forgotten in recent years until attention was called to it in our columns by the late Mr. H. L. Barnard.[1] He reported cases in which pneumonia, pleurisy, and pyopneumothorax simulated acute abdominal conditions, such as acute appendicitis and perforative peritonitis. Abdominal pain, tenderness, and rigidity may be "referred" consequences of thoracic disease, because the lower intercostal nerves supply the abdomen as well as the thorax. In the *Australian Medical Journal* of Jan. 27th Dr. W. R. Groves has reported a very interesting case in which the simulation was increased by the fact that the patient was convalescing from typhoid fever. A girl, aged 20 years, had passed through a severe but uneventful attack of typhoid fever in the Kyneton Hospital. One day, when the temperature had been normal for three weeks, she had a breakfast of bread-and-butter, milk, and an egg at 8 A.M. Two hours later she was seized with violent pain, at first in the left shoulder and side, but quickly shifting to the upper abdomen. The resident surgeon found the whole abdomen board-like and tender, particularly in its upper half. When Dr. Groves saw her, an hour later, she complained of great pain in the abdomen, but now mainly in the lower half, and rigidity and tenderness were most marked below the umbilicus. The pulse was 120, the temperature was 99·2° F., and the respirations were 28. There were no pulmonary signs. It was feared that perforation had occurred. One eighth of a grain of morphine and hot applications were ordered and a consultation was sought with Dr. R. B. Duncan. He agreed in the diagnosis of perforation, but counselled further delay before operating, as the patient was suffering too much from shock. The pulse was 136, the temperature was 102°, and the respirations were 28. Later in the afternoon she seemed a little better generally, but the pain and the abdominal tenderness and rigidity remained as marked as ever, particularly below the umbilicus. The liver dulness was normal, but there appeared to be moveable dulness in the flanks. The respirations were now somewhat hurried, though no pulmonary signs could be found, and the face was rather flushed than pale—important facts in the light of subsequent events, to which insufficient importance was attached. At 8 P.M. the abdomen was opened below the umbilicus. No free fluid could be found. The appendix was normal. On following the ileum upwards at a distance of a few feet from the cæcum there were found 2 feet of empty bowel with shrunken puckered walls and paler than the rest of the intestine—a condition which might be described as "enterospasm." As nothing more could be found another incision was made above the umbilicus, but careful examination again revealed no lesion. The wounds were closed and the patient on leaving the table had, if anything, improved. As the "enterospasm" would not account for the symptoms, the possibility of pneumonia was for the first time seriously considered. During the night the pulse was 136, the temperature was 105°, and the respirations were 48, and some cough was observed. Next day the main symptoms of pneumonia—disturbed pulse-respiration ratio, high temperature, short cough, and flushed cheeks—were present. But there was no expectoration and no definite signs could be found. During the following night the temperature fell by crisis to normal, and next morning distinct signs of consolidation were found at the right base, although any pain complained of at the onset was in the left side of the chest. Convalescence was uninterrupted. This is not the first time that a futile laparotomy has been performed in thoracic disease. In Mr. Barnard's paper is recorded the case of a girl, the subject of gastric ulcer, who was seized in the street with violent epigastric pain and vomiting. She was taken to the London Hospital in a state of collapse. The abdomen was rigid, motionless, very tender, and distended, and these signs were most marked in the epigastric region. Laparotomy was performed, but no sign or trace of gastric ulcer could be found. On the third day there were signs of right basal pneumonia. Death occurred on the fifth day and the necropsy showed double basal pneumonia and right diaphragmatic pleurisy. In the stomach was a shallow ulcer. The only point which should have aroused suspicion was the temperature of 104·5°, unless it was the number of respirations, which unfortunately was not recorded. Dr. Groves suggests that in his case, instead of the abdominal symptoms being directly "referred" effects of the pulmonary lesion, as is usually held, the "enterospasm" was the referred condition and produced the abdominal symptoms. Dr. Duncan agrees with this, and refers to the fact that in several cases operation has been performed for enterospasm. The suggestion that the abdominal symptoms of thoracic disease may be due to enterospasm appears to be new, though Mr. Barnard, with his usual accuracy, pointed out that visceral signs distributed along the whole alimentary canal occur, and noted among these paralysis of the intestines causing abdominal distension.

[1] THE LANCET, August 2nd, 1902, p. 280.

AN ANTIVACCINATION BILL.

A BILL to repeal the Vaccination Acts has been introduced into the House of Commons by Mr. A. W. Black. In three brief clauses and a schedule it proposes to repeal all Acts and portions of Acts that give legal effect to vaccination, to forbid the expenditure of any public money, national or parochial, on the practice or material of vaccination, and to prohibit the requirement of vaccination as a prerequisite to

employment in any Government, public, or parochial service, or to attendance at, or employment or service in, "any public institution, charity, hospital, or school." Mr. Black's suggestions for legislation are short and silly.

A UNIVERSAL GAZETTE OF MEDICAL LITERATURE.

WE have received from the Claudius-Verlag Amandus M. F. Martens, of Wandsbeck, the preliminary announcement of the *Bibliographische Monatsschrift*, an international gazette of universal medical literature, under the editorship of H. Albert-Hellmers, which will appear in 12 parts yearly at an annual price of 30 marks (or 20 marks cash). Each issue will appear about the middle of the month and will contain a list of (*a*) all newly issued books, and (*b*) all important articles appearing in the technical journals, indexed by titles and by authors. There is no periodical publication covering the same ground and keeping pace with current literature. The splendid index-catalogue of the Surgeon-General's Library at Washington appears only at long intervals and in book form. It is questionable whether indexing by title is as good as indexing by subject with frequent cross references. For instance, to take a case from the sample pages submitted with the circular:—"Effects, the, upon the heart of soluble digitoxin, an isolated glucoside of the digitalis group," would be of little service when indexed under "E" as "Effects" to one seeking information about the heart or about digitoxin, both of which would easily be found in a subject-index. We note also that out of eight columns of title references only 16 references, or half a column, are to English literature. This is a defect that would have to be remedied if it were desired to attract an English-speaking *clientèle*. There can be no doubt, however, that there is room for a satisfactory periodical publication on these lines. A fairer judgment can be made of the enterprise when the first part is available for inspection.

WE regret to announce the death, on April 12th, at the advanced age of 84, of Dr. William Ogle, who was for 23 years superintendent of statistics in the General Register Office, and made many important contributions to the science of medical statistics. We hope to publish an obituary notice of Dr. Ogle in an early issue.

INTERNATIONAL MORAL EDUCATION CONGRESS.—Under the patronage of the Queen Mother of the Netherlands and with Prince Henry of the Netherlands as Honorary President the Second International Moral Education Congress will be held at the Hague from July 29th to August 3rd. Great Britain, India, the principal countries of Europe, Japan, and the United States will be represented, and according to the preliminary programme the first aim of the Congress will be to cultivate the coöperation of men and women representing different schools of thought in matters of education and the formation of character. Mr. F. Charles, 22, Park-crescent, Church End, Finchley, London, is the honorary secretary for Great Britain.

LITERARY INTELLIGENCE.—Mr. Stephen Paget, the honorary secretary of the Research Defence Association, has written a book summarising in ten chapters the evidence given before the recent Royal Commission on Vivisection, as well as the inspector's report for 1910. The volume contains in a final chapter a brief account of the report of that Commission, and an introduction by Lord Cromer. The book will be published by Mr. H. K. Lewis.—New editions of Hutchison and Rainy's "Clinical Methods" and Mitchell Bruce's "Materia Medica" are announced for publication early in May by Messrs. Cassell and Co. In the revision of "Materia Medica" Dr. Mitchell Bruce has had the collaboration of Dr. Walter J. Dilling, lecturer on pharmacology in the University of Aberdeen.

TREATMENT BY MEANS OF MECHANICAL THERAPEUTICS AT THE EDGAR ALLEN INSTITUTE, SHEFFIELD.

BY RODOLPH ABERCROMBIE, M.D. CAMB.,
MEDICAL DIRECTOR, EDGAR ALLEN INSTITUTE FOR MEDICO-MECHANICAL TREATMENT, SHEFFIELD.

THE Edgar Allen Institute has been established for the purpose of carrying out, as a charitable institution, various forms of physical treatment, more particularly treatment by means of mechanical therapeutics. The form of mechanical apparatus used is that designed by Dr. Zander, of Stockholm, who is justly regarded as the originator of this method of treatment. In general terms, it may be said that the apparatus is designed to carry out by mechanical means the various movements and manipulations which make up the Swedish system of physical treatment.

The apparatus consists of three groups. In the *first* for *active movements* the patient performs the particular movement against the resistance of a weight and lever; in the *second* for *passive movements* the movement (e.g., flexion and extension or circumduction of a joint) is carried out by a power driven apparatus, without the aid of the patient's muscles; and the *third group* is for mechanical operations, as percussions or vibrations. All the apparatus are exactly graduated, so that the physician can regulate the force and range of the movement, and can prescribe the *dosage* of his treatment, instead of leaving it (as he must do when manual treatment is employed) to the judgment of the masseur. This exact graduation is of especial service in dealing with such conditions as impaired joint mobility or muscular paresis, for it enables the force of the treatment to be increased, step by step, as the patient's condition improves.

Economic considerations constitute one of the advantages of mechanical treatment; for after the initial expenditure for apparatus mechanical treatment can be carried out much more cheaply than similar treatment performed by hand, especially when large numbers of patients are dealt with.

Although the apparatus can do much, in certain of the manœuvres of massage proper, nothing can replace the human hand. At the Sheffield Institute the treatment is supplemented in certain cases by massage given by trained Swedish masseurs. The number of patients treated at present is about 100 a day.

Injuries.—Owing to the industrial nature of the population the results of fractures, dislocations, and other severe injuries of the limbs form a large proportion of the cases. Such cases do not usually come under treatment until a period measured in months has elapsed after the time of accident. Much of the residual disability depends on adhesions about joints or tendons and on muscular paresis. In such conditions the Zander treatment has been found an effective method of restoring the patient's working capacity. Considerable improvement has even been obtained in cases in which the disability has lasted for several years. Adhesions are treated by passive movements of the affected joint, the range of movement being gradually advanced as the condition improves. In treating painful joints mechanical treatment possesses the following advantage: when such a joint is being moved *by hand* the manipulator, actuated by a desire for the patient's good, is tempted occasionally to summon up a vicarious heroism, and make a sudden increase in the excursion of the movement. The patient is always on the watch for acts of benevolence of this nature, and keeps his muscles in a state of contraction in order to frustrate them. Thus the manœuvre is rendered less effective and more painful. On the other hand, when the movement is performed by a *machine*, the patient knows that the range of movement is definite; he therefore confides himself to the apparatus and relaxes his muscles, and the movement is often performed with remarkably little pain.

For weakened muscles, active movements are used against the resistance provided by a weight and lever. An ingenious use is made of the principles of the lever in the Zander apparatus. At the beginning of a movement, when the muscle is fully elongated and therefore weak, the lever is inclined *downwards* from the horizontal, so that the resistance is small; half way through the movement, when the muscle is half contracted, and therefore strongest, the lever

rises to the horizontal, and the resistance is thus at a maximum; towards the end of the movement, when the muscle is fully contracted and therefore weak again, the lever rises nearly to the vertical, and the resistance is therefore again small. This correspondence beween the power of the muscle and the magnitude of the resistance throughout the movement is an essential feature of the Zander apparatus, and explains its success in the treatment of muscular paresis. It requires great skill to preserve this proportion when resistance movements are given by hand. It is unquestionable that the best way to restore the power of weakened muscles is to exercise them. Massage, so often prescribed for this purpose, is comparatively of little value.

Many of the cases of injury are sent for treatment by the surgeons concerned in the administration of the Workmen's Compensation Act. An institution of this nature provides a means of giving the necessary treatment under supervision; and cases the genuineness of whose symptoms is doubtful can be kept under observation. In Germany many Zander institutes are supported by funds provided by the public bodies administering the Insurance against Accident Act of that country.

Chronic joint affections.—Many cases of rheumatoid arthritis and osteo-arthritis are treated, with good results in suitable cases. The most favourable cases are those in which the acute phase of the disease is past. The treatment is directed to the correction of deformities, the increase of mobility in the joints, and the restoration of wasted muscles. Passive movements are chiefly used. The range of tolerable movement in the affected joint is ascertained, and this, at intervals, is very gradually increased. Painful and violent movements are apt to bring about a local recrudescence. In certain cases vibrations are useful. This last method of treatment has stood the test of time in Sweden, and is of real value, notwithstanding the discredit cast upon it by the absurd pretensions of quacks. Cases of chronic articular gout have also been treated with success.

Affections of the nervous system.—In *hemiplegia* considerable increase in muscular power may often be obtained by means of graduated active movements. Passive movements are used for the correction of contractures. In *neurasthenia* the treatment has been found of much value. Ordinated daily exercise results in improved appetite and sleep; special movements are given (when indicated) for improving deficient respiratory power or remedying constipation. Vibrations often relieve the distressing cranial or abdominal subjective symptoms. In *neuritis* the mechanical treatment has proved of less value than manual treatment.

Scoliosis.—Good results have been obtained by combining the Zander treatment with the movements of the usual Swedish medical gymnastics.

Cardiac disease.—Treatment by movements is not much used in England for this condition, but the few cases treated have done well. The scope of the treatment cannot be discussed here. In outline it resembles the "mountain-climbing cure." Mechanical therapeutics possess the advantage of being easily available, and of being susceptible of exact dosage.

Chronic pulmonary affections.—In certain cases the treatment is of value in maintaining the elasticity of the thorax or in restoring its shape (e.g., after pleural effusion). Movements designed to improve the inspiratory or expiratory power may be given as indicated.

General Policy and Method of Conduct of the Institute.

The conditions mentioned above show that mechanical therapeutics possess a considerable field of utility. It has been realised that the usefulness of the institution depends on the coöperation of the practitioners of the neighbourhood. No cases whatever are received for treatment except through the introduction of a medical man. Both free and paying patients are treated, special hours being reserved for the latter. Patients of limited means are treated at reduced fees, upon the recommendation of the medical men sending them for treatment. Hitherto, this plan has worked well. The sums received in fees are to be devoted to the general purposes of the Institute. In addition to the patients sent by practitioners, cases are sent for treatment from the out-patient department of the Sheffield Royal Hospital and the Royal Infirmary. The Institute is to be controlled by an influential committee, upon which the medical profession is adequately represented.

The staff consists of a medical director and three trained Swedish masseurs (one male and two female), who act as instructors in addition to performing massage. There are also two untrained attendants. Such a staff is capable of dealing with about 120 patients a day. The number of staff required obviously depends largely on the nature of the cases. In Sheffield the cases treated are mostly of a severe nature. The grave affections of an industrial and mining population require (though they do not always obtain) more attention than the minor ailments of the members of the leisured classes who frequent such institutes at Continental spas.

The structure of the Institute and the apparatus have been presented to the city of Sheffield by Mr. Wm. Edgar Allen of that city, who has undertaken to defray the cost for a period of three years. After that time, hopes are entertained that the Institute will be self-supporting by means of public subscriptions and the fees obtained from paying patients. However that may be, the three years will enable the profession of Sheffield to form an opinion upon the value of a method of treatment which has hitherto perhaps not aroused sufficient interest in this country.

THE METROPOLITAN HOSPITAL SUNDAY FUND AND ST. GEORGE'S HOSPITAL.

WE have had given to us for publication the following report made by Sir Thomas Crosby, M.D., Lord Mayor of London, to the Metropolitan Hospital Sunday Fund, of which he is President, with regard to the methods of expenditure at St. George's Hospital. On receipt of this report the committee of the Fund made an award to the hospital. The situation is commented on in a leading article this week.

SIR THOMAS CROSBY'S REPORT.

The committee of the King's Hospital Fund have withheld their grant to St. George's Hospital on the ground that the amount expended upon the bacteriological and pathological departments is excessive and much larger than the proportion spent thereon at other hospitals.

In order to carry out my undertaking at the last meeting of the Metropolitan Hospital Sunday Fund I visited the hospital on Feb. 12th, when I was met by the treasurer and some of the house committee, who placed before me an account of the work done in those departments, the cost of their maintenance, and the amount represented by that cost per occupied bed. Statistics obtained from other hospitals showing this proportion were also produced for comparison. It was pointed out that the work of these departments is essential for the proper diagnosis and treatment of the patients of the hospital; that it is necessarily undertaken by skilled experts; and that in St. George's Hospital all reports on clinical material are furnished personally by the bacteriologist and pathologist to the hospital, and not by students, or even by house physicians or house surgeons. The work includes examinations of blood, excretions, sputum, &c., post-mortem examinations, and the examination of various growths and tissues; the preparation of vaccines, &c., besides the care of the museum, which is the property of the hospital; also a variety of chemical examinations.

A careful investigation of the whole matter convinced me that the bacteriological and pathological departments of St. George's Hospital are doing work which is recognised at all efficient hospitals as essential to the scientific diagnosis and treatment of disease; that the amount expended upon it is in no way excessive, and does not represent a larger cost per occupied bed than is the case at many other London hospitals, although, as the accounts of these departments are not kept in a corresponding manner at different hospitals (various items being excluded, or included), it is difficult to show this in exact figures. The work of these departments is as necessary to the welfare of the patients as that of the electrical department, the X ray investigations, or the preparation of drugs; and it involves most laborious processes, which can only be efficiently carried out by skilled and highly trained officers, with appropriate salaries.

I am of opinion, after an investigation of all the facts, that the proportionate amount paid by the hospital and school for the upkeep of the laboratories is a fair and proper one, and that the sums expended upon these departments by the hospital are properly taken from the general funds, being for the direct treatment of the patients.

THE INTERNATIONAL CONGRESS ON TUBERCULOSIS AT ROME.

(FROM OUR SPECIAL SANITARY COMMISSIONER.)

Rome, April 12th.

HEAVY rain and gusts of icy wind from the snow-clad Apennines, with but an occasional gleam of hot sunshine, did not (on April 10th) afford glad welcome to the early arrivals. Fortunately, these were not numerous, and it was hoped the weather would mend before the great crowd of members reached Rome. Already more than 2500 names were inscribed. They would not all come; but others not yet announced were sure to make up their minds at the last moment. A large gathering was therefore confidently expected. In the meanwhile the business committee of the annual International Conference on Tuberculosis met at 10 A.M. on the 10th, and though they had nothing but purely business matters to discuss, the meeting did not break up till after 1 o'clock. M. Léon Bourgeois, the President, was unfortunately unable on account of ill-health to attend, and deputed Professor A. Calmette, of the Pasteur Institute, to take his place. But the general secretary, Professor Gotthold Pannwitz, was present and took the chair. Among the various business matters treated, it was decided that the conference should meet next year at Berlin and the year following at Berne. At night there was a friendly gathering at the Hôtel Quirinal, and on April 12th and 13th the general discussions of the Conference will take place.

Problem of Nationalisation.

To return to the Congress, which is to be solemnly inaugurated on the 14th, no less than 31 different national units will be represented. But if we count the individual States within these units, such as those of the United States of America, and Hungary within Austria, whose governments are specially represented, no less than 56 States are sending members to the Congress. This problem of governments and nationalities has always caused much trouble at the congresses, imposing political questions on a scientific gathering, and these are not at all welcome. Thus, at the last great Medical Congress the Poles claimed the right to separate representation, and the Hungarians strongly object to see the identity of their kingdom lost in the Austrian Empire. But the members of the Congress come to discuss tuberculosis, not the merits of the various home-rule claims. Nevertheless, and in spite of this obvious desire and necessity of avoiding all disputatious political problems, these questions come up over and over again with the regularity of clockwork.

Historical Associations of Place of Meeting.

Round the castle of St. Angelo there are spacious grounds where various exhibitions can be held and ample space exists for the establishment of tent and hut hospitals. There is also a long succession of rooms where a garrison used to be lodged. All these are now vacant and serve very well for committee rooms and for smaller meetings. A press bureau is already established, with courteous attendants eager to give information. These barracks were built at the beginning of the eighteenth century, have only one storey, and give on to a sheltered arcade. Here meals will be served under cover, but in the open air, during the Congress. The whole of the castle is thrown open gratuitously to the members of the Congress, and it will need several hours of climbing up stairs and walking through long, dark, sinister passages before all this great fortress, prison house, and palace can be seen and appreciated. The whole place is most romantic and picturesque. It recalls some stirring periods of history, and it will not be altogether easy to think of the scientific problems the Congress has met to elucidate when surrounded by so many dramatic historical souvenirs. There will be a tendency to go to see the rooms in the castle that various Popes inhabited, and the batteries they built and the quaint old artillery with which they were manned. There are the dungeons, the splendid view from the top, the dark passages and Roman burial-place below. The art of Michelangelo and of Raphael contributes to decorate the residential portion of the castle, inhabited by Alexander VI., Clement VII., and other Popes. Fortunately, there will be no morning sittings, so the members should have time to see many things without neglecting the work of the Congress.

Meeting of Tenth International Conference.

On April 11th the Tenth International Conference met for general discussion both morning and evening. They sat in the Pauline Hall, high up, almost at the very top of the great castle of St. Angelo. It was necessary to ascend a spiral road built within the huge tower, and such low broad steps as horses might easily climb. The sombre roadway is lit here and there, and occasionally gives on to a terrace or battlements still armed with quaint cannon several centuries old. At last the balcony of Julius II. is reached, whence there is a commanding view of the Eternal City. Before attaining this altitude, the members pass historical prison cells where great celebrities in art and politics, as well as ordinary criminals, used to be incarcerated. These cells, devoid of light and with but little air, are striking illustrations of the progress which humanity has made, for to-day the worst of criminals would have better sanitary conditions in his prison. In Benvenuto Cellini's cell there are still traces of a charcoal drawing he attempted to make upon the wall. The Council Hall, or Pauline Hall, is a part of the apartments the Popes occupied when, for motives of personal security, they elected to live in the castle. The walls and ceilings are one mass of paintings by artists of the Raphaelesque school. The scenes depicted are mainly from Roman or Greek mythology, and all the figures are muscular and robust, and seem to protest against any idea of asceticism. The hall is oblong in shape, and instead of the platform being placed across one end it was situated in the centre and had a table in the middle. There was nothing to distinguish the chairman's seat from that of any of the other members of the committee sitting round the table. As many of the audience were behind the chairman as in front of him, and altogether it appeared more like a family gathering than a conference.

A Revolutionary Proposal.

The modest dimensions of this gathering did not deter Professor Calmette, director of the Pasteur Institute at Lille, from making quite a subversive proposition. This consists of nothing more or less than the total suppression of the international congresses against tuberculosis, and their replacement by the Conference. At first sight this rather sounds like proposing that a mouse should devour an elephant. The Conference did not seem to be more than a section meeting of one of the great international congresses; but it is just because these congresses, those of Hygiene, of Tuberculosis, and the Medical Congresses are so very huge that the need of some alteration has long been felt. Now we have a definite proposal, the substitution of conferences for congresses. At a congress all and sundry are admitted, with the result that from 2000 to 6000 persons may attend. But few cities are large enough or possess the financial means of receiving such a crowd of guests. The number of members of the present Congress that opens its sittings on Sunday will not fall far short of 3000, representing, as already stated, 31 different national units and 56 different States. The Conference list of membership gives from the United States of America, 7 members; Belgium, 8; Brazil, Bulgaria, Denmark, Greece, Monaco, and Servia, 1 member each; Portugal, Roumania, Sweden, and Spain send 2 members; Germany heads the list with 35 members, and France comes second with 15 members; Austria 9, Italy and Norway 7, Russia 6, Great Britain and Switzerland 5 each, and Hungary 3. Altogether there are, with the president and secretary, 127 members, and this little group proposes to swallow up the thousands that attend the great international congresses. But if this should be done what is to prevent the conferences of the future becoming as large as the congresses of the past? The answer is that none can attend a conference unless they are invited. The national committees would decide who should be invited and would exclude those who come for mere purposes of advertising some drug or special remedy, or themselves. What has to be remembered here is that however obnoxious the presence of such persons may be, they are not very numerous. The vast majority of the members attending a congress, especially if they have come from some considerable distance, are really interested in the object held in view. Would it be wise to keep them away? Would not the gate thus be shut to many

chances of progress? All the wisdom in the world does not lie with those who have already attained to an official position.

The Need of a Congress on Congresses.

But a great crowd makes serious discussion extremely difficult and it develops a tendency to "speak to the gallery." On the other hand, this speaking for the sake of general applause may possess some advantage. It altogether depends on the object held in view. Pure scientific research and discussion should aim at the truth alone, gallery or no gallery. But these great congresses have another purpose, —that is, the educating of public opinion towards the ultimate realisation of the reforms that scientific research has shown to be necessary. Here, then, we have two totally different objects, needing a different policy, and yet the one is the complement of the other. Undoubtedly Professor Calmette has raised a very controversial question, and its solution is a matter of urgent importance. To me it would suggest the need of a Congress on the Organisation of Congresses. With agenda overflowing already, so difficult a matter as that raised by Professor Calmette can never, for want of time, be properly discussed at this Congress.

Relations of Human and Animal Tuberculosis.

A very important meeting took place on the morning of April 12th, though only ten members of the Conference attended. These were the speakers who took part in the discussion held yesterday relating to the question which occasioned so animated a debate at the Washington Congress—namely, the relations between human and bovine tuberculosis. Among those present were Professor Calmette, Professor Kössel, Professor G. Sims Woodhead, Dr. Nathan Raw, Professor Neufeld, Professor Vladimir, Professor Arloing, junior, Professor Schrötter, and two others. As on many previous occasions, the German members sought to belittle the danger of bovine tuberculosis, while the British representatives took the opposite view. On the previous day and in the public meeting Dr. Nathan Raw, of Liverpool, had insisted that though the principal source of infection was from person to person, nevertheless there was a large amount of tuberculosis affecting children which was caused by the bacillus of the typus bovinus. This was conveyed in the milk from tuberculous cows. Dr. Raw also added that probably bovine tuberculosis produces in the human body an immunity, more or less complete, against infection by the human bacillus, and *vice versâ*. However this might be, he urged it was of the utmost importance that tuberculous dairy cows should be eradicated so as to remove this source of danger from children, and he concluded that some 20 per cent. of cases of tuberculosis in England were due to bovine bacilli. Professor Sims Woodhead also spoke at length, explaining the minute care taken by the British Royal Commission on Tuberculosis in the experiments they had made, and describing them so thoroughly that the methods employed could be checked and verified by anyone who entertained any doubt. Professor Kössel, of Heidelberg, replied that the Germans recognised that infection by the bovine bacillus was possible, but were convinced that it occurred so rarely that it need not cause much anxiety. It was in consequence of this difference of opinion that the speakers were invited to meet and try to agree on a resolution which they could present to the Conference. This meeting has been held, and the following is the text of the resolution which was finally adopted and is likely to be confirmed to-morrow by the Conference:—

1. The prophylaxis against tuberculosis must principally be directed against the suppression of contamination from man to man, and especially in the family.
2. The contamination of man by bovine infection is of less frequency; nevertheless, it is necessary to maintain all measures against infection of bovine origin.

This resolution was drawn up and adopted for the guidance of the public, and it may be taken to imply the eradication of tuberculosis in cattle and therefore the destruction of tuberculous dairy cows.

To-day (the 12th) the approaches of the castle of St. Angelo presented a more animated appearance. Members of the Congress were arriving, but though some of these were also belated members of the Conference the latter continues to be poorly attended. In the beautiful Pauline Hall this afternoon I counted only 30 members of the Conference present, yet this is the body which, it is proposed, should swallow the Congress at a mouthful. The Conference is, I fear, a little ambitious, though it would be a good thing if the congresses were reduced to more manageable proportions.

Rome, April 14th.

The Inauguration of the Congress.

The Congress is open, the rain continues, and confusion everywhere prevails. Everybody has information to give, but it has little or nothing to do with the Congress. The inauguration ceremony, we were informed, would take place in the presence of Their Majesties the King and Queen of Italy at the Capitol. Strangers to Rome did not realise at first that this meant a small salon in the Palace of the Conservatori on the side of the Piazza del Campidoglio that faces the Museum of the Capitol. To reach this point there is a steep and winding ascent, very difficult for horses to traverse, the more so as the rain had made the road slippery. To my knowledge at least one cab was overthrown. The public authority, represented by a policeman, sat complacently on the horse's head to give the congressisti time to crawl out from under the cab. When they gradually emerged they were not over pleased, nor did their mud-bespattered raiment suggest a royal reception. But the real mistake rests precisely in the fact that it was not a royal reception for which they were bound. The municipality of Rome insisted that, as the Congress was meeting in Rome, it was for them to receive the Congress, and this on their own premises, however unsuitable these might be for the purpose. Even so, if great care had been taken not to issue more cards than the space at disposal warranted, though many persons would inevitably still have been dissatisfied, they would not have run the risk of catching cold or of being crushed to death. But the issue of a limited number of invitations would not have satisfied those who look to State functions as an opportunity for supplementing the very insufficient salaries they receive. My cab set me down in front of the entrance to the Capitoline Museum, which, after more than 20 years' absence, I did not recognise. Seeing a great crowd holding up invitation cards I pressed forward, but was soon roughly repelled and told to go to the other side. After pressing through carriages and gendarmes I reached the other side of the Piazza del Campidoglio, only to be told to return to the entrance where we had already been refused admission. A large number of people were thus harassed and kept running backwards and forwards by these contradictory instructions, and it was only after a fierce struggle that I ultimately penetrated the yard of the Conservatori, or town councillors' building. Here, again, we were pushed about, men and women shouting angry protests and cries of alarm at the crush. At last there was a fiercer rush, the clatter of horses was heard, there was a gleam of swords, and a squadron of cavalry was upon us. Someone cried "Make way for the King," and a couple of modest broughams followed, bringing the Royal party. When Their Majesties were safe in the building we naturally imagined that we in our turn would be admitted. It was not so, however. We were kept standing in the rain among the cavalry escort and the empty carriages.

Members Crowded Out by Strangers.

For a while we curbed our impatience by contemplating the colossal hands, feet, and arms of some huge statues. We had also for company the cinerary urn of Agrippina, wife of Germanicus, which was subsequently used as a measure for corn, and a statue of a draped female considered to personify the city of Rome. This was all very interesting, but had little to do with tuberculosis. And why were we not admitted? The sky was of a uniform grey, it rained a little, the yard was damp and cold, and the stones we stood upon seemed to get colder and harder the longer we waited. Several continental journalists, note-books in hand ready to take down the speeches, were in a similar plight, and finally we gathered together and held a council of war. How was the opening ceremony to be described, and what telegrams should be sent to the press? One veteran journalist, who had been here when the Medical Congress met at Rome in 1894, told us terrible stories of the confusion that then prevailed. His explanation was simple. The servants were very badly paid. There were a number of Americans and other rich strangers at the hotels who were willing to pay any price, from 5 lire to 50 lire, for the opportunity of assisting at some sort of a Court function. To obtain and sell tickets to such persons was one of the perquisites of the service. Thus, when the members of a congress arrived they

found their places occupied by strangers. As the room where the inauguration was to take place could hold only from 300 to 400 people, and any number of persons had been admitted who had nothing whatever to do with the Congress, only a very small proportion of the members gained admission. When ultimately their Majesties left, and the few who had gained admittance came out, I observed that not half of them wore the Congress badge. They probably represented the surreptitious trade in tickets just described.

The Congress in the Rain.

When at length I entered the room where the inauguration ceremony had taken place, I looked for a copy of the speech that Professor Baccelli, as President of the Congress, was to have delivered. This had been translated into English and French. Last night I waited more than an hour after the appointed time to see my proof of the English version, and a friend devoted a great part of the evening to dictating and then correcting the French version. All this was to be printed during the night and, we were told, would surely be at our disposal early in the morning. But there was nothing. No reporters' tables, no translations—nothing whatsoever, and we were not admitted so as to describe what occurred or to take notes of what was said.

A much more severe organisation is obviously necessary. There are theatres in Rome, large concert halls, and the Parliament buildings, where the House is not now sitting. It would, therefore, have been quite easy to find room for all the members of the Congress and many others also if the inauguration ceremony had been held, as is almost always the case, in some very large hall or theatre. The Hygiene Congress met in the Grand Opera House at Madrid and in the Reichstag in Berlin. But above all, measures must be taken to prevent Congress tickets getting into the hands of those who are not members of the Congress. When room is sufficient two sorts of tickets might be issued. The more the general public sees of such congresses the better for the propagandising work they have to accomplish, but that is not a sufficient reason for keeping the members of a Congress standing out in the rain while total strangers are admitted.

ASYLUM REPORTS.

Ayr District Asylum (*Annual Report for the Year 1911*).—At this asylum the daily average number resident during the year was 548·37. The total number of admissions was 168. Among the admissions incurable forms of insanity were in large proportion, while the bodily condition was poor in 68 per cent. of the cases, and 25 per cent. were in a very weak exhausted state. Dr. G. Douglas McRae, the medical superintendent, points out that 35 per cent. of the men and 33 per cent. of the women had been affected mentally for over a year prior to admission, a fact which suggests that the asylum is still the last resort for the cure of insanity instead of the first. The public remain strongly prejudiced against insanity. It is the hardest thing in the world to eradicate the erroneous impressions of asylums cherished by the great mass of the people. The hospital or curative character of the modernly equipped asylum has yet to be impressed on the popular imagination. The recovery rate, calculated on the number of admissions, is 25 per cent. for the men and over 41 per cent. for the women. The number of deaths among men was 12·6 per cent., and among the women 8·5 per cent. on the average daily number resident. Dr. McRae points out that in the event of the Asylum Officers Bill becoming law and being made applicable to Scotland, the cost of maintenance of each patient in this asylum will be increased by at least £2 19*s.* per annum.

City of London Asylum and Hospital for Mental Diseases, Stone, near Dartford (*Annual Report for the Year 1911*).—The average number daily resident at this asylum was 613, as against 589 in 1910. In a chart appended by Dr. R. H. Steen, the resident physician and superintendent, it is shown that the average number resident has risen almost continuously from 158 in 1866 to the number recorded for 1911. The number of admissions is regulated solely by the number of vacancies, and at times so numerous are the applications that a waiting list is formed. During 1911, 150 cases were admitted. Considerably over one-third of the total were suffering from varieties of melancholia, and the recoveries numbered 29; the proportion of recoveries to direct admissions was 25·43 per cent. More than half of the recoveries had a length of residence less than 6 months, indicating that if a recovery is going to take place it is generally completed in a short time. One woman, however, recovered after a residence of 8½ years. The deaths numbered 48, and 30 necropsies were made. The proportion of deaths to the average number resident was 7·83 per cent.

James Murray's Royal Asylum, Perth (*Annual Report for the Year ending March 31st, 1911*).—At this asylum the average daily number resident was 126·97. There were admitted 27 cases, 26 of whom were received for the first time. The average age on admission was 47·9. Fourteen of those admitted were hereditarily predisposed, while 8 belonged to families of neuropathic tendencies. The number of curable patients admitted is stated at 22, and of these 11 had left recovered at the time of the issue of the report. The recovery-rate is 41·94 on the number of admissions; the average duration of residence of those recovered was 7½ months. The percentage of deaths on the average number resident was 8·66. The average age at death was 71 years and the average duration of residence was 18 years.

Glasgow District Mental Hospital, Gartloch (*Annual Report for the Year ending May 14th, 1911*).—The average number resident during the year was 776·8. 307 cases were admitted during the year, this being the largest number that has yet been attained. 136 of the admissions were first attacks of less than one year's duration. The decrease noticed in previous years in the proportion of cases admitted during the period of maturity (30 to 50), though fluctuating, appears to persist, while the percentage of cases admitted during the period of decline (above 50) still tends to rise. One hundred cases were discharged recovered, or 32·5 per cent. calculated on the admissions. It appears that many of the more transient and easily recoverable attacks of insanity are now treated in Duke Street Hospital without certification, and this of course tends to reduce the recovery rates of the district mental hospitals. The deaths numbered 106, a percentage on the average number resident of 13·6 per cent. Twenty-five of these deaths were due to general paralysis of the insane, which caused more deaths than any other single cause. Nineteen were due to cerebral hæmorrhage or softening, 21 to heart disease or arterio-sclerosis, 15 to tuberculous disease, and 12 to pneumonia. Dr. W. A. Parker, medical superintendent, reports that the Verandah Hospital, with its open-air bed treatment, continues to provide the environment in which the detailed individual treatment of acute cases is carried out. He reports that the use of salvarsan has not been found beneficial in general paralysis.

Glasgow Royal Asylum (*Annual Report for the Year 1911*).—At this asylum the average number resident was 445. There were 115 admissions, 62 men and 53 women. An inherited brain instability was present in 60 of the admissions. The mean age of the admissions for 1911 was 44·5. As is too often the case, many of the admissions did not come under treatment until late in their illness. In 25 only had the illness lasted less than three months, while in 53 it was of more than 12 months' duration. The chances of recovery are inversely as the duration of the illness, and this is shown in one of the statistical tables, where out of 38 recoveries it is seen that 16 took place in those whose illness lasted less than three months. Only 5 recovered who had been ill for more than a year before they came under treatment. The discharges numbered 89, of whom 38 were recovered, the recovery-rate being 33 per cent. on the admissions. The duration of treatment was less than three months in 12 of the recoveries, between three and six months in 11, and between six and 12 months in 12. The deaths numbered 25, a percentage of 5·6 on the average number resident. Necropsies were held in 14 cases. Dr. L. R. Oswald, the physician-superintendent, reports that the physical condition of many of his patients is on admission most unsatisfactory, and that it is surprising how rapidly in many cases the physical and mental symptoms abate with open-air bed-treatment. The treatment of general paralysis by means of salvarsan eventuated in so much benefit in 2 cases that they were discharged. It is, however, to be remembered that remissions frequently spontaneously recur in this disease. Dr. Oswald writes of the proposed amendment of the Superannuation Act of 1909 that it is considered in Scotland that statutory restriction of the hours of employment of

asylum nurses and attendants is not only uncalled for but would seriously interfere with the nursing spirit, and with the spirit of willing service, which are so essential to successful hospital work.

Govan District Asylum, Hawkhead, Paisley (Annual Report for the Year ending May 14th, 1911).—At this asylum the daily average number resident was 633·6. The total number of admissions was 255, of which 114 were males and 141 females. Of the patients admitted 57 were in an unsatisfactory state of bodily health: 87 persons were discharged recovered and 63 were discharged unrecovered. The percentage of recoveries to the total admissions was 34·1. Forty-two persons were discharged after a residence of less than six months, and 23 after a residence of over six months and less than 12 months. The deaths were at the rate of 12·9 per cent. of the daily average number resident, the total number of deaths being 82, among which 35 were due to diseases of the nervous system, 12 to heart disease, and 17 to lung disease.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

MEETING OF COUNCIL.

A QUARTERLY meeting of the Council was held on April 11th, Mr. RICKMAN J. GODLEE, the President, being in the chair.

In pursuance of the resolution of Feb. 1st a presentation of plate was made to Mr. Richard Higgins Burne, M.A. Oxon., on his retirement from the office of Assistant Conservator of the Hunterian Museum, in recognition of the able and efficient services rendered by him during a period of 20 years. It was resolved to ask Mr. J. F. Colyer to give three demonstrations on the Odontological Collection in the Museum. The John Tomes prize was awarded to Mr. Arthur Hopewell-Smith in accordance with the recommendation of the John Tomes prize committee.

The Council, in pursuance of the report of the examiners in anatomy, appointed Mr. Alan Cecil Perry, of the London Hospital Medical School, the Begley Student for the ensuing three years. Lieutenant-Colonel James John Pratt, I.M.S., a Member of 20 years' standing, was elected a Fellow in recognition of his valuable services in connexion with hospital administration and surgical work in India.

A letter was read from Mr. J. J. Lister thanking the Council on behalf of the relatives of the late Lord Lister for their condolence and expressing appreciation of their high tribute to Lord Lister's memory and work.

A letter was read from the honorary secretary of the First International Eugenics Congress to be held at the University of London on July 24th to 30th next, and inviting the College to appoint a delegate to attend its meetings. Mr. G. H. Makins was appointed.

A letter was read from the honorary secretaries of the Child Study Society enclosing a preliminary programme of the conference of the society to be held in the University of London on May 9th, 10th, and 11th, and asking the College to send two delegates to the conference, at which the subject for discussion will be "The Health of the Child in Relation to its Physical and Mental Development." Mr. C. T. Dent and Sir Alfred Pearce Gould were appointed.

The PRESIDENT reported that a conference on the National Insurance Act was held at the Royal College of Physicians on March 21st, at which were present representatives of the Medical Faculties of the Universities, of the Royal College of Physicians, of the Royal College of Surgeons, and of the Society of Apothecaries (40 in all), and that the following resolutions were passed:—

1. That it be recommended to the constituent bodies of this conference that they sanction its formation as a joint committee for watching the interests of the medical profession in regard to the Insurance Act and considering alternative methods of attaining the objects of the medical portion of the Act.

2. That an "Agenda Subcommittee" be formed, to consist of ten members, resident in London; that the President of the Royal College of Physicians, the President of the Royal College of Surgeons, and the Master of the Society of Apothecaries be *ex-officio* members of this subcommittee, and also the Registrar of the Royal College of Physicians, who shall act as secretary; and that the remaining members be nominated by the two Presidents.

3. That this conference, in which are represented the Medical Faculties of the Universities of England and Wales, the Royal College of Physicians of London, the Royal College of Surgeons of England, and the Society of Apothecaries, recognises that there is a remarkable unanimity of opinion within the medical profession as to the attitude which its members should adopt towards the working of the National Insurance Act of 1911. This Conference desires to place on record its general approval of the principles which inspire that attitude, and, while conscious that there is some difference of opinion with regard to details, expresses its willingness to support the demand that these principles should be recognised by those who are responsible for the administration of the Act before medical practitioners consent to work under it.

The Council expressed approval of the action which had been taken.

THE LONDON COUNTY COUNCIL AND MEDICAL AFFAIRS.

REPORT BY THE SCHOOL MEDICAL OFFICER ON OPEN-AIR SCHOOLS.

THE Education Committee of the London County Council has issued a report by the school medical officer, Dr. J. Kerr, as to the results from a health point of view of the two open-air schools held in London during 1911.

Trying Weather Conditions.

The Birley House school was opened (the report stated) at the beginning of April, 1911. During the first week the weather was exceptionally severe for the time of the year: the temperature during school hours was from 40° to 50° F., with at night sometimes 2° to 3° of frost. A north-easterly wind was accompanied by frequent snow to the depth of several inches. The sunshine, however, was fair in amount. In spite of the inclement weather school was carried on as usual, the children taking shelter in a Doecker shed during the blizzards. It was noteworthy that although the children came from homes where a close atmosphere and closed windows were the rule, none of them were harmed by this sudden change. Several contracted colds in the head, but in no case was school attendance interfered with. The hot summer—for many weeks the shade temperature recorded on the average was 80° F.—was not ideal for the purposes of the school, and accounted for the somewhat poor increase in weights noticed. Owing to the enervating effect of the heat it was found necessary to curtail the physical exercise and dancing. Three months of wet, windy, and unsettled weather followed, with occasional typical London fog, but there was never any need to bring the children indoors. On very wet days the classes were held in the Doecker shed, which had been considerably improved by the addition of removeable side windows, devised by the head-master and so fitted as largely to close in the open side of the shed, whilst admitting plenty of fresh air and keeping out wind and rain. During this abnormally wet period there were no ill-effects from exposure, and the attendance was not curtailed. A notable innovation was the introduction of clogs for the children's use.

The Children's Health on Admission.

On admission the children presented a miserable and uncared-for appearance. They came from very poor districts and most of them were badly clothed and dirty, ill-nourished and anæmic, and had bad teeth. A majority suffered from lung conditions, such as fibroid changes, collapse, and bronchiectasis, due to repeated and neglected attacks of bronchial catarrh. Several had a family history of phthisis and some had been treated previously for it. Judging from physical signs alone, two children might have been considered to be suffering from phthisis, though not in an active state. Several had enlarged cervical glands and one a tuberculous elbow-joint. Of the more common ailments there were on admission: enlarged tonsils, 3 cases; adenoids, 2; other defects of throat and nose, 2; defective vision, 12; teeth requiring treatment, 52 (about three-fourths of all the children); discharging ears, 6. The chief difficulty in obtaining treatment was the apathy of the parents, with whom, as they were scattered over South London, it was not easy to get in touch. Throat and ear conditions had now been remedied, sight attended to, and glasses obtained in almost all cases. The children were taken for dental treatment in batches, but 31 children still required further treatment.

The Hæmoglobin Test.

Dr. Kerr included in his report tables showing that as

regarded both height and weight the children at the open-air schools on admission were considerably below the average of London County Council school children generally. During the 36 weeks of attendance at the school the children gained in these respects more rapidly than the standard child, especially during the last ten weeks of cooler weather. For the purpose of comparison the hæmoglobin of 120 children at three schools of good average type was estimated at the ordinary medical inspection, the children's ages ranging from 3 to 13 years. The result was as follows:—

Hæmoglobin Averages of 120 Children at three London County Council Schools.

	Boys.	Girls.
Number examined	55	65
Hæmoglobin average ...	87·8 per cent.	88·9 per cent.

Hæmoglobin Averages at Birley House, 1911.

	Boys.	Girls.
At opening of school ...	81 per cent.	81·4 per cent.
At end of 26 weeks ...	86·1 ,, ...	86 5 ,,
,, 36 ,, ...	87·7 ,, ...	88 ,,

The average percentage of hæmoglobin had now reached almost to the average of ordinary London County Council school children, and a continued improvement might be looked for. Of the 38 boys, the percentages of 24 showed an increase at the thirty-sixth week, 6 were stationary, and 8 had decreased. Of the 37 girls, the percentages of 22 showed an increase, 10 were stationary, and 5 had decreased. In some cases the abnormal hot weather, in others teeth extractions or other operations appeared to account for the fall. Bad home circumstances in some cases were at the root of the want of improvement.

The State of Nutrition.

The state of nutrition, expressed as grammes weight per centimetre at the various ages, was as follows:—

Boys.			*Girls.*		
Age last birthday.	Nutrition on admission.	Nutrition at 36th week.	Age last birthday.	Nutrition on admission.	Nutrition at 36th week.
9	193·0	209·8	9	185 4	191·8
10	203·1	207 6	10	181 0	200·1
11	203·8	226·1	11	193·4	201 0
12	209·9	227·1	12	225·8	220 7
13	221·0	254·9	13	207·1	249 4

The chest expansion of the boys on admission was 1·9 inches, at the end of the period 2 inches; of the girls, on admission 1·8 inches, at the end of the period 2·4 inches. It should be remembered that a majority of the children on admission were suffering from lung conditions.

The Beneficial Effect upon Debilitated Children.

The brightness and general contentment of the children, as compared with their former apathy and often sullen resentment towards the open-air life, demonstrated the educational value of such an experience as this. The experience at the Shooter's Hill school again showed that the more unhealthy and debilitated the child at entrance, the more there was room for improvement, the greater was the rate of return to health. The method of admission, based on general unhealthiness as well as on the presence of definite disease, meant the selection of generally very anæmic children. While 73 per cent. of admissions showed by the hæmoglobinometer test only 75 per cent. of normal, by the end of the school period only 2 per cent. remained below it. Probably the majority of the children were tuberculous in the widest sense, but only 14 were definitely so classed. Of these, five were cases of pulmonary tuberculosis; they increased in weight, became less anæmic, and gained in general health, but the lung condition improved in only one case, in which no traces of active lung disease could be detected at the closure of the school. Material improvement could scarcely be expected whilst children returned for the greater part of their time to their original environment. In the asthma cases the attacks seemed as frequent during school attendance as previously. The great function of the open-air school appeared to be its stimulating effect upon the merely debilitated child, who became happier and more interested in his, or her, work, preferring the open-air school to the class-room from which he, or she, had been drafted.

CENTRAL MIDWIVES BOARD.

A SPECIAL meeting of the Central Midwives Board was held on March 27th at Caxton House, Westminster, Sir FRANCIS H. CHAMPNEYS being in the chair. The Board considered the following charges amongst others against the midwives whose names are given below and ordered them to be struck off the roll.

Ada Clews, that on Jan. 6th, 1912, she was convicted at the Crewe police court of having been found drunk and incapable on a public highway; that she was not scrupulously clean, as required by Rule E, 1, and that she did not possess the appliances or antiseptics required by Rule E, 2. **Frances Elizabeth Cooper**, that at the Bristol police court on Dec. 21st, 1911, she was convicted of feloniously stealing seven brooches and a necklace. **Mary Elizabeth Cornwall**, that being in attendance as a midwife at a confinement, the child suffering from inflammation of and discharge from the eyes, she did not explain that the case was one in which the attendance of a registered medical practitioner was required, nor did she hand to the husband or the nearest relative or friend present the form of sending for medical help, properly filled up and signed by her, in order that this might be immediately forwarded to the medical practitioner, as required by Rule E, 20 (5). **Sarah Coulson**, that being in attendance as a midwife at a confinement, the death of the child having occurred before the attendance of a registered medical practitioner, she failed to notify the local supervising authority thereof as required by Rule E, 21 (1) (b); and that she did not take the patient's pulse and temperature. **Helen Dickinson**, that being in attendance as a midwife at a confinement she did not take with her to the confinement the appliances and antiseptics required by Rule E, 2; she left the patient after the commencement of the second stage of labour, and before the birth of the child, contrary to Rule E, 6, and did not at any time take the patient's temperature as required by Rule E, 13. **Rachel Hancock**, that she habitually neglected to advise medical help in cases of abortion, as required by Rule E, 19; that she did not take and record the pulse and temperature of her patients at each visit, and that she did not keep her register of cases as required by Rule E, 23. **Eliza Harrison**, that being in attendance as a midwife at a confinement, and having been informed by the medical man in attendance on the patient that the case was one of puerperal fever, and having been warned of the danger of attending any other maternity patient, she nevertheless subsequently on the same day attended as a midwife at a confinement and delivered the patient of a child, without having disinfected herself, her clothing, and appliances to the satisfaction of the local supervising authority as required by Rule E, 5. **Emily Langley**, that being in attendance as a midwife at a confinement, a registered medical practitioner having been sent for, she failed to notify the fact to the local supervising authority as required by Rule E, 21 (1) (a); the death of the child having occurred before the attendance of a registered medical practitioner she failed to notify the fact to the local supervising authority as required by Rule E, 21 (1) (b); and that she did not adopt antiseptic precautions. **Mary Rolles**, that being in attendance as a midwife at a confinement, the child being still-born, she did not notify the local supervising authority thereof, as required by Rule E, 21 (1) (c); that she did not understand antiseptic treatment, and that she could not make use of a clinical thermometer, and was consequently unable to comply with Rule E, 13. **Mary Ann Shields**, that being in attendance as a midwife at a confinement she did not disinfect her hands and forearms on each occasion before touching the patient's generative organs, as required by Rule E, 3; she did not wash the baby at any time, and she did not at any time take the patient's pulse or temperature, as required by Rule E, 13. **Alice Turner**, that being in attendance as a midwife at a confinement, the child being dangerously feeble at birth, she did not explain that the case was one in which the attendance of a registered medical practitioner was required, nor did she hand to the husband or the nearest relative or friend present the form of sending for medical help, properly filled up and signed by her in order that this might be immediately forwarded to the medical practitioner, as required by Rule E, 21 (5). **Alice Vaughan**, that when called to a confinement she did not take with her the appliances and antiseptics required by Rule E, 2,

and that she was unable to make use of a clinical thermometer, and consequently did not take the temperature of her patients as required by Rule E, 13. The following midwife was censured after charges against her had been considered—Elizabeth Calcroft.

A special meeting of the Central Midwives Board was held on March 28th at Caxton House, Westminster, with Sir Francis H. Champneys in the chair. The Board considered the following charges, amongst others, against the midwives whose names are given below and ordered them to be struck off the Roll:—Mary Ann Howell, that being in attendance as a midwife at a confinement, the case being one of delayed labour, she did not explain that the attendance of a registered medical practitioner was required, nor did she hand to the husband or the nearest relative or friend present the form of sending for medical help, properly filled up and signed by her, in order that this might be immediately forwarded to the medical practitioner, as required by Rule E, 19 (4) of the rules then in force. Sarah Jackson, that she was not scrupulously clean in her person, clothing, appliances, and house, as required by Rule E, 1, and that she was unable to use a clinical thermometer and consequently could not take the temperature of her patients, as required by Rule E, 13. Sarah Kilbourne, that being in attendance as a midwife at a confinement, the placenta and membranes not having been completely expelled, she did not wait for two hours from the birth of the child and then advise medical aid, as required by Rule E, 20 (3), but inserted her hand into the uterus and removed some of the membranes, and the patient having twice asked that a medical man might be sent for, she stated on each occasion that this was unnecessary. Hannah Perry, that being in attendance as a midwife at a confinement, the child suffering from inflammation of, and discharge from, the eyes, she did not explain that the case was one in which the attendance of a registered medical practitioner was required, nor did she hand to the husband or the nearest relative or friend present the form of sending for medical help, properly filled up and signed by her, in order that this might be immediately forwarded to the medical practitioner, as required by Rule E, 20 (5). Jane Rigby, that having been duly suspended from practice on the ground that she was herself liable to be a source of infection, she nevertheless, while still under suspension, engaged herself to attend, and did attend, as a midwife at confinements, and that she did not possess the appliances and antiseptics required by Rule E, 2. Eliza Smith, that being in attendance as a midwife at a confinement, the patient's perineum being seriously ruptured, she did not explain that the case was one in which the attendance of a registered medical practitioner was required, nor did she hand to the husband or the nearest relative or friend present the form of sending for medical help, properly filled up and signed by her, in order that this might be immediately forwarded to the medical practitioner, as required by Rule E, 20 (3), and medical advice having been sought she failed to notify the local supervising authority thereof, as required by Rule E, 21 (1).

The following midwives were censured after charges against them had been considered: Catherine Hodgkiss and Hannah Tilstone. Anne Pogoste was cautioned after charges against her had been considered.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

THE Registrar-General's weekly return will in future include the recently extended borough of Cambridge and will relate to 95 towns, each of which had a population exceeding 50,000 persons at the Census of 1911. In these 95 towns, whose aggregate population in the middle of this year is estimated at 17,639,830 persons, 8190 births and 4744 deaths were registered during the week ending April 6th. The annual rate of mortality in these towns in the week under notice was equal to 14·0 per 1000, compared with 14·6, 14·1, and 14·6 in the 94 towns in the three preceding weeks. During the first quarter of the current year the mean annual death-rate in the 94 large towns averaged 16·2 per 1000, while in London during the same period the average annual death-rate did not exceed 15·3 per 1000. The annual death-rates in the several towns in the week under notice ranged from 5·7 in Smethwick, 6·2 in Southend-on-Sea, 6·3 in Devonport, 6·4 in Wimbledon, and 7·0 in Edmonton, to 20·3 in Burnley, 21·3 in Salford, 21·7 in Oldham, and 23·5 in Warrington.

The 4744 deaths from all causes were 176 fewer than the number in the previous week, and included 434 from the principal epidemic diseases, against numbers decreasing from 434 to 405 in the three preceding weeks. Of these 434 deaths from the principal epidemic diseases 162 resulted from whooping-cough, 131 from measles, 51 from infantile diarrhœal diseases, 49 from diphtheria, 24 from scarlet fever, and 17 from enteric fever, but not one from small-pox. The mean annual death-rate from these diseases was equal to 1·3 per 1000, against 1·3 and 1·2 in the two preceding weeks. The deaths attributed to whooping-cough, which had declined from 159 to 147 in the three preceding weeks, rose to 162 in the week under notice, and caused the highest annual death-rates of 1·8 in West Ham, 1·9 in Gillingham, in Stockport, and in Huddersfield, 2·1 in Oldham, and 2·5 in Merthyr Tydfil. The deaths referred to measles, which had been 137, 138, and 119 in the three preceding weeks, rose to 131 in the week under notice; the highest annual death-rates from this disease were 1·5 in Portsmouth, 1·6 in Brighton, 1·7 in Manchester, 1·8 in Nottingham, 2·0 in Wakefield, 2·3 in Cardiff, 2·8 in Warrington, 2·9 in Salford, and 4·3 in Newport (Mon.). The fatal cases of diarrhœa among children under 2 years of age numbered 51 in the week under notice, against 69 and 54 in the two preceding weeks, and included 20 in London and its suburban districts, 4 in Birmingham, 4 in Liverpool, and 3 in Manchester. The deaths referred to diphtheria, which had been 55, 35, and 56 in the three preceding weeks, declined to 49 in the week under notice; 11 deaths were recorded in London and its suburban districts, 4 in Portsmouth, 4 in Liverpool, 4 in Manchester, and 3 in Bristol. The deaths attributed to scarlet fever, which had been 17 in each of the two preceding weeks, rose to 24 in the week under notice and included 3 in Birmingham, 3 in Liverpool, 2 in Norwich, and 2 in Birkenhead. The fatal cases of enteric fever, which had been 11 and 12 in the two preceding weeks, rose to 17 in the week under notice; 4 deaths were registered in London, and 2 each in Birmingham, Leeds, and Sheffield.

The number of scarlet fever patients under treatment in the Metropolitan Asylums and in the London Fever Hospital, which had decreased from 1384 to 1321 at the end of the three preceding weeks, had further declined to 1263 on Saturday, April 6th; 121 new cases of this disease were admitted to these institutions during the week, against 152, 137, and 133 in the three preceding weeks. These hospitals also contained on April 6th, 1009 cases of diphtheria, 566 of whooping-cough, 226 of measles, 57 of enteric fever, and 1 of small-pox. The 1137 deaths from all causes recorded in London were 34 fewer than the number in the previous week, and were equal to an annual death-rate of 13·1 per 1000. The deaths referred to diseases of the respiratory system, which had been 224, 246, and 191 in the three preceding weeks, rose to 236 in the week under notice, but were 69 below the number recorded in the corresponding week of last year.

Of the 4744 deaths from all causes in the 95 large towns 135 resulted from different forms of violence, and 324 were the subject of coroners' inquests. The causes of 33, or 0·7 per cent., of the deaths registered in the week under notice were not certified either by a registered medical practitioner or by a coroner after inquest. All the causes of death were duly certified in Sheffield, Leeds, Bristol, West Ham, Bradford, Hull, Newcastle-on-Tyne, Nottingham, and in 69 other smaller towns. The 33 uncertified causes of death in the week under notice included 4 in Birmingham, 4 in Gateshead, 3 in Portsmouth, 3 in Liverpool, and 2 each in London, Dudley, Manchester, Barrow-in-Furness, and Barnsley.

In the 95 largest English towns having an estimated population of 17,639,830 persons in the middle of this year, 8556 births and 4744 deaths were registered during the week ending April 13th. The annual rate of mortality in the large towns, which had been 14·1, 14·6, and 14·0 per 1000 in the three preceding weeks, was again 14·9 per 1000 in the week under notice. During the first quarter of the current year the mean annual death-rate in the 94 large towns averaged 16·2 per 1000, and was 0·9 per 1000 in excess of the average

rate recorded in London during the same period. The annual death-rates in the several towns last week ranged from 6·4 in Wallasey, 6·9 in Ilford, 7·4 in Cambridge, 8·1 in Enfield, and 8·2 in Reading, to 19·9 in Gateshead, 20·3 in Burnley, 21·1 in Salford, 22·0 in Stockton-on-Tees, and 22·3 in St. Helens.

The 4744 deaths from all causes coincided with the number in the previous week, and included 386 which were referred to the principal epidemic diseases, against 405 and 434 in the two preceding weeks. Of these 386 deaths from the principal epidemic diseases, 146 were referred to whooping-cough, 121 to measles, 50 to infantile diarrhœal diseases, 39 to diphtheria, 16 to scarlet fever, 13 to enteric fever, and 1 to small-pox. The mean annual death-rate from these diseases was equal to 1·1 per 1000, against 1·2 and 1·3 in the two preceding weeks. The deaths attributed to whooping-cough, which had been 155, 147, and 162 in the three preceding weeks, declined to 146 last week, and caused the highest annual death-rates of 1·1 in West Ham and in Manchester, 1·3 in Southampton, in Salford, and in Gateshead, 1·5 in East Ham, 1·7 in Walsall, 1·9 in Merthyr Tydfil, and 2·3 in Edmonton. The deaths referred to measles, which had been 138, 119, and 131 in the three preceding weeks, declined to 121 last week; the highest annual death-rates from this disease were 1·8 in Newport (Mon.), 2·0 in Wakefield, 2·1 in Warrington, 3·4 in Cardiff, and 3·6 in Salford. The fatal cases of infantile diarrhœa, which had declined from 69 to 51 in the three preceding weeks, were 50 last week, and included 17 in London and its suburban districts, 3 in Leeds, and 2 each in Portsmouth, Birmingham, Liverpool, Oldham, and Rhondda. The deaths attributed to diphtheria, which had been 35, 56, and 49 in the three preceding weeks, declined to 39 last week; 12 cases were recorded in London, 4 in Liverpool, and 2 each in Portsmouth, Manchester, Leeds, and Stockton-on-Tees. The deaths referred to scarlet fever, which had increased from 13 to 24 in the four preceding weeks, fell to 16 last week and included 2 each in London, Birmingham, Liverpool, and Newport (Mon.). The fatal cases of enteric fever, which had been 11, 12, and 17 in the three previous weeks were 13 last week; 4 deaths were registered in Sheffield and 2 in Bradford. The death from small-pox occurred in Bristol.

The number of scarlet fever patients under treatment in the Metropolitan Asylums and in the London Fever Hospital, which had decreased from 1384 to 1263 in the four preceding weeks, had further declined to 1242 on Saturday last; 119 new cases of this disease were admitted to these institutions during the week, against 137, 133, and 121 in the three preceding weeks. These hospitals also contained on Saturday last 976 cases of diphtheria, 587 of whooping-cough, 242 of measles, 49 of enteric fever, and 1 of small-pox. The 1172 deaths from all causes recorded in London were 36 in excess of the number in the previous week, and were equal to an annual death-rate of 13·5 per 1000. The deaths referred to diseases of the respiratory system, which had been 246, 191, and 236 in the three preceding weeks, declined to 227 last week, and were 52 below the number recorded in the corresponding week of last year.

Of the 4744 deaths from all causes in the 95 towns, 188 resulted from different forms of violence, and 390 were the subject of coroners' inquests. The causes of 43, or 0·9 per cent., of the deaths registered in the week under notice, were not certified either by a registered medical practitioner or by a coroner after inquest. All the causes of death were duly certified in Manchester, Leeds, Bristol, West Ham, Bradford, Newcastle-on-Tyne, Nottingham, Portsmouth, and in 66 other smaller towns. The 43 uncertified causes of death included 9 in Birmingham, 5 in St. Helens, 4 in Liverpool, 3 in Gateshead, and 2 each in Stoke-on-Trent, Rochdale, Darlington, and Sunderland.

HEALTH OF SCOTCH TOWNS.

In the 18 largest Scotch towns, whose aggregate population is estimated at 2,182,400 persons in the middle of this year, 1176 births and 674 deaths were registered during the week ending April 6th. The annual rate of mortality in these towns, which had been 17·4 and 17·0 per 1000 in the two preceding weeks, further declined to 16·1 per 1000 in the week under notice. During the first quarter of the current year the mean annual rate of mortality in these towns averaged 18·4 per 1000, while in the 94 large English towns during the same period it did not exceed 16·2 per 1000. In the week ending April 6th the annual death-rates in the several Scotch towns ranged from 6·5 in Clydebank, 9·1 in Kirkcaldy, and 9·2 in Govan, to 19·2 in Greenock, 19·3 in Dundee, and 19·5 in Kilmarnock.

The 674 deaths from all causes were 35 fewer than the number in the previous week, and included 72 which were referred to the principal epidemic diseases, against 95 and 87 in the two preceding weeks. Of these 72 deaths, 42 resulted from measles, 13 from diarrhœal diseases, 10 from whooping-cough, 4 from scarlet fever, 2 from diphtheria, and 1 from enteric fever, but not one from small-pox. These 72 deaths from the principal epidemic diseases were equal to an annual death-rate of 1·7 per 1000, or 0·4 per 1000 above that recorded in the 95 large English towns. The deaths attributed to measles, which had been 50 and 48 in the two preceding weeks, further declined to 42 in the week under notice, and included 15 in Glasgow, 6 in Leith, 5 in Partick, 4 in Edinburgh, 4 in Paisley, and 3 in Kilmarnock. The deaths of infants under two years of age referred to diarrhœal diseases, which had been 16 in each of the two preceding weeks, declined to 13 in the week under notice; 3 deaths occurred in Glasgow, 2 in Dundee, and 2 in Greenock. The fatal cases of whooping-cough, which had been 13 and 12 in the two preceding weeks, declined to 10 in the week under notice, and included 3 in Glasgow, 2 in Aberdeen, and 2 in Paisley. The deaths attributed to scarlet fever, which had been 5 and 7 in the two preceding weeks, declined to 4, and comprised 2 in Glasgow and 2 in Aberdeen. The 2 fatal cases of diphtheria were registered in Dundee, and that of enteric fever in Glasgow.

The deaths referred to diseases of the respiratory system, which had increased from 98 to 123 in the three preceding weeks, declined to 106 in the week under notice. The causes of 17 deaths were referred to different forms of violence, against 18 and 34 in the two preceding weeks.

In the 18 largest Scotch towns, with a population estimated at 2,182,400 persons in the middle of this year, 1288 births and 693 deaths were registered during the week ending April 13th. The annual rate of mortality in these towns, which had declined from 17·4 to 16·1 per 1000 in the three preceding weeks, rose to 16·6 per 1000 in the week under notice. During the first quarter of the current year the mean annual rate of mortality in these towns averaged 18·4 per 1000, and was 2·2 per 1000 in excess of the rate recorded during the same period in the 94 large English towns. The annual death-rates last week in the several Scotch towns ranged from 6·1 in Falkirk, 9·8 in Govan, and 10·0 in Motherwell, to 23·6 in Coatbridge, 24·9 in Ayr, and 27·0 in Kilmarnock.

The 693 deaths from all causes were 19 in excess of the number in the previous week, and included 82 which were referred to the principal epidemic diseases, against numbers decreasing from 95 to 72 in the three preceding weeks. Of these 82 deaths, 49 resulted from measles, 11 from whooping-cough, 9 from diphtheria, 7 from infantile diarrhœal diseases, 3 from scarlet fever, 2 from enteric fever, and 1 from typhus, but not one from small-pox. These 82 deaths from the principal epidemic diseases were equal to an annual death-rate of 1·9 per 1000, or 0·8 per 1000 above that recorded in the 95 large English towns. The deaths attributed to measles, which had declined from 50 to 42 in the three preceding weeks, rose to 49 last week, and included 15 in Glasgow, 10 in Edinburgh, 6 in Paisley, 4 in Coatbridge, 3 in Leith, and 3 in Motherwell. The deaths referred to whooping-cough, which had been 13, 12, and 10 in the three previous weeks, were 11 last week; 3 deaths were recorded in Glasgow, 2 in Coatbridge, and 2 in Kilmarnock. The fatal cases of diphtheria, which had declined from 9 to 2 in the three preceding weeks, rose to 9 last week, and included 3 in Glasgow and 2 in Dundee. The deaths of infants under two years of age attributed to diarrhœal diseases, which had been 16, 16, and 13 in the three preceding weeks, declined last week to 7, and included 3 deaths in Glasgow. The 3 deaths referred to scarlet fever were slightly below the average in recent weeks, and comprised 2 in Greenock and 1 in Glasgow. The 2 fatal cases of enteric fever were recorded in Glasgow and Coatbridge respectively, and that of typhus in Glasgow.

The deaths referred to diseases of the respiratory system, which had been 107, 123, and 106 in the three preceding weeks, declined to 103 in the week under notice. The deaths resulting from the several forms of violence numbered 17 and were equal to the number in the previous week.

HEALTH OF IRISH TOWNS.

In the 22 town districts of Ireland, whose aggregate population is estimated at 1,157,014 persons in the middle of this year, 499 births and 464 deaths were registered during the week ending April 6th. The annual rate of mortality in these towns, which had been 20·7 and 23·5 per 1000 in the two preceding weeks, declined to 20·9 per 1000 in the week under notice. During the first quarter of the current year the mean annual rate of mortality in these Irish towns averaged 23·4 per 1000; in the 94 large English towns during the same period the mean annual death-rate did not exceed 16·2 per 1000, while in the 18 Scotch towns it was equal to 18·4 per 1000. The annual death-rates in the week ending April 6th were 25·0 in Dublin (against 13·1 in London), 19·3 in Belfast, 24·5 in Cork, 14·0 in Londonderry, 13·6 in Limerick, and 24·7 in Waterford; while in the 16 smallest of these Irish towns it did not exceed 16·0 per 1000.

The 464 deaths from all causes in the 22 Irish towns were 57 fewer than the number in the previous week, and included 46 which were referred to the principal epidemic diseases, against 25 and 38 in the two preceding weeks; of these 46 deaths, 17 resulted from whooping-cough, 11 from measles, 7 from diphtheria, 6 from diarrhœal diseases, 2 from scarlet fever, 2 from enteric fever, and 1 from typhus fever, but not one from small-pox. These 46 deaths from the principal epidemic diseases were equal to an annual death-rate of 2·1 per 1000; the death-rate from these diseases in the same week did not exceed 1·3 per 1000 in the 95 large English towns, or 1·7 per 1000 in the 18 Scotch towns. The deaths attributed to whooping-cough, which had been 16, 4, and 16 in the three preceding weeks, were 17 in the week under notice, and included 13 in Belfast and 2 in Dublin. The deaths referred to measles, which had averaged 7 in the three preceding weeks, rose to 11, and comprised 10 in Dublin and 1 in Limerick. The 7 fatal cases of diphtheria were 2 in excess of the average in the four preceding weeks, and included 4 in Dublin. The deaths of infants under two years of age from diarrhœal diseases numbered 6, or 1 fewer than the average in the three preceding weeks, and comprised 3 in Belfast, 2 in Dublin, and 1 in Waterford. The 2 deaths from scarlet fever were registered in Dublin and Belfast respectively, the 2 fatal cases of enteric fever in Dublin, and that of typhus fever in Belfast.

The deaths referred to diseases of the respiratory system, which had been 148, 136, and 173 in the three preceding weeks, declined to 134. Of the 464 deaths from all causes in the 22 Irish towns, 148, or 32 per cent., occurred in public institutions, and 7 resulted from different forms of violence. The causes of 8, or 1·7 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest; in the 95 large English towns the proportion of uncertified causes of death in the same week did not exceed 0·7 per cent.

In the 22 town districts of Ireland, having an estimated population of 1,157,014 persons in the middle of this year, 675 births and 466 deaths were registered during the week ending April 13th. The annual rate of mortality in these towns, which had been 23·5 and 20·9 per 1000 in the two preceding weeks, rose to 21·0 per 1000 in the week under notice. During the 13 weeks of the first quarter of the current year the mean annual death-rate in these Irish towns averaged 23·4 per 1000; in the 94 large English towns the mean annual death-rate during the same period did not exceed 16·2 per 1000, while in the 18 Scotch towns it was equal to 18·4 per 1000. The annual death-rates in the several Irish towns last week were equal to 25·4 in Dublin (against 13·5 in London), 19·6 in Belfast, 20·4 in Cork, 12·7 in Londonderry, 20·4 in Limerick, and 9·5 in Waterford, in the 16 smallest of these towns the mean annual death-rate did not exceed 18·1 per 1000.

The 466 deaths from all causes in the 22 Irish towns were 2 in excess of the number in the previous week, and included 40 which were referred to the principal epidemic diseases, against numbers increasing from 25 to 45 in the three preceding weeks; of these 40 deaths, 14 resulted from measles, 12 from whooping-cough, 11 from diarrhœal diseases, 2 from scarlet fever, and 1 from diphtheria, but not one from enteric fever or from small-pox. These 40 deaths from the principal epidemic diseases were equal to an annual death-rate of 1·8 per 1000; the death-rate from these diseases last week did not exceed 1·1 per 1000 in the 95 large English towns, while in the 18 Scotch towns it was equal to 1·9 per 1000. The deaths attributed to measles, which had increased from 6 to 11 in the three preceding weeks, further rose to 14 last week and were all registered in Dublin. The deaths referred to whooping-cough, which had increased from 4 to 17 in the three previous weeks, declined to 12 last week, and comprised 9 in Belfast, 2 in Dublin, and 1 in Limerick. The 11 fatal cases of diarrhœa were 5 in excess of the average in the three preceding weeks, and included 9 of infants under two years of age; 7 deaths occurred in Dublin, 3 in Belfast, and 1 in Londonderry. The 2 deaths referred to scarlet fever were recorded in Kilkenny and Portadown respectively, and that to diphtheria in Dublin.

The deaths referred to diseases of the respiratory system, which had been 173 and 134 in the two preceding weeks, were 135 in the week under notice. Of the 466 deaths from all causes in the 22 Irish towns 132, or 28 per cent., occurred in public institutions, and 5 resulted from different forms of violence. The causes of 17, or 3·6 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest; in the 94 large English towns the proportion of uncertified causes of death last week did not exceed 0·9 per cent.

VITAL STATISTICS OF LONDON DURING MARCH, 1912.

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality in the City of London and in each of the metropolitan boroughs. With regard to the notified cases of infectious diseases, it appears that the number of persons reported to be suffering from one or other of the ten diseases specified in the table was equal to an annual rate of 4·6 per 1000 of the population, estimated at 4,519,754 persons in the middle of the year; in each of the two preceding months the rate was 5·3 per 1000. The lowest rates last month were recorded in Kensington, Hammersmith, the City of Westminster, Islington, the City of London, Poplar, and Lambeth; and the highest rates in St. Pancras, Bermondsey, Deptford, Greenwich, and Woolwich. Two cases of small-pox were notified during the month, and one small-pox patient remained under treatment in a Metropolitan Asylums Hospital at the end of the month. The prevalence of scarlet fever showed a considerable decline from that recorded in the previous month; this disease was proportionally most prevalent last month in Chelsea, St. Marylebone, Stoke Newington, Bermondsey, Deptford, Greenwich, and Woolwich. The Metropolitan Asylums Hospitals contained 1296 scarlet fever patients at the end of last month, against 1878, 1473, and 1375 at the end of the three preceding months; the weekly admissions averaged 141, against 165 and 166 in the two preceding months. Diphtheria was slightly less prevalent than it had been in other recent months; the greatest proportional prevalence of this disease last month was recorded in Paddington, St. Pancras, Greenwich, Lewisham, and Woolwich. There were 1045 diphtheria patients under treatment in the Metropolitan Asylums Hospitals at the end of last month, against 1191 and 1129 at the end of the two preceding months; the weekly admissions averaged 122, against 134 and 137 in the two preceding months. The prevalence of enteric fever showed a marked decline from that recorded in the two preceding months; this disease was proportionally most prevalent in Chelsea, Islington, Bethnal Green, Stepney, Southwark, Wandsworth, and Woolwich. The number of enteric fever patients under treatment in the Metropolitan Asylums Hospitals, which had been 76, 49, and 64 at the end of the three preceding months, had declined to 52 at the end of last month; the weekly admissions averaged 7, against 9, 8, and 10 in the three preceding months. Erysipelas was proportionally most prevalent in Finsbury, Shoreditch, Bethnal Green, Bermondsey, Deptford, and Greenwich. The 30 cases of puerperal fever notified during the month included 5 in Fulham, 3 in Lambeth, 3 in Wandsworth, and 2 each in Stepney, Southwark, Battersea, Camberwell, and Deptford. Of the 9 cases notified as cerebro-spinal meningitis, 2 belonged to Poplar and 2 to Southwark; and of the 10 cases notified as poliomyelitis, 3 belonged to Bermondsey.

The mortality statistics in the table relate to the deaths of persons actually belonging to the several boroughs, the deaths occurring in institutions having been distributed among

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING MARCH, 1912.

(Specially compiled for THE LANCET.)

CITIES AND BOROUGHS.	Estimated population in the middle of 1912.	NOTIFIED CASES OF INFECTIOUS DISEASE.												DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.‡										Deaths from all causes.	Death-rate per 1000 living.†
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cerebro-spinal meningitis.	Poliomyelitis.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.*	Whooping-cough.	Enteric fever.	Diarrhœa and enteritis (under 2 years).	Total.	Annual rate per 1000 persons living.			
LONDON	4,519,754	2	634	583	—	48	1	30	290	9	10	1607	4·6	—	79	8	41	106	6	71	311	0·9	4596	14·0
West Districts.																									
Paddington	142,362	—	18	31	—	—	—	1	10	1	—	61	5·6	—	2	—	1	3	—	1	7	0·6	158	15·5
Kensington	171,746	—	21	11	—	1	—	—	5	—	—	38	2·9	—	—	—	—	1	—	1	2	0·2	159	13·0
Hammersmith	122,750	—	8	12	—	—	—	1	11	—	1	33	3·5	—	2	—	2	—	—	—	4	0·4	96	10·6
Fulham	155,402	—	16	23	—	1	—	5	7	1	—	53	4·4	—	3	—	—	5	—	5	13	1·1	144	12·7
Chelsea	65,397	—	13	10	—	3	—	1	1	—	—	28	5·6	—	—	—	—	1	—	—	1	0·2	86	17·7
City of Westminster	157,248	—	24	12	—	2	—	1	3	—	—	42	3·5	—	9	—	1	1	—	3	14	1·2	160	14·9
North Districts.																									
St. Marylebone	116,155	—	24	18	—	—	—	—	7	—	1	50	5·6	—	—	3	2	—	1	3	9	1·0	131	15·7
Hampstead	85,966	—	6	14	—	1	—	1	3	—	—	25	3·8	—	—	—	3	—	—	—	3	0·5	74	12·6
St. Pancras	216,145	—	29	58	—	—	—	1	14	—	—	102	6·2	—	2	—	2	3	—	6	13	0·8	236	14·8
Islington	326,398	—	22	36	—	5	—	1	17	—	—	81	3·2	—	9	1	2	12	—	4	28	1·1	369	15·3
Stoke Newington	50,561	—	9	3	—	—	—	—	6	—	—	18	4·6	—	—	—	—	—	—	—	—	—	46	12·4
Hackney	222,986	—	36	18	—	1	—	1	16	—	—	72	4·2	—	—	—	1	5	—	4	10	0·6	190	11·6
Central Districts.																									
Holborn	48,026	—	7	4	—	1	—	—	3	—	—	15	4·1	—	—	—	—	—	—	—	—	—	60	17·5
Finsbury	86,130	—	6	14	—	—	—	—	10	—	—	30	4·5	—	—	—	1	3	—	—	4	0·6	103	16·2
City of London	18,695	—	2	—	—	—	—	—	1	—	—	3	2·1	—	1	—	—	—	—	—	1	0·7	16	12·0
East Districts.																									
Shoreditch	110,430	—	9	10	—	1	—	—	12	—	—	32	3·8	—	1	—	1	—	—	7	9	1·1	115	14·3
Bethnal Green	127,985	—	8	12	—	2	—	—	13	1	1	37	3·8	—	1	—	—	2	1	2	6	0·6	133	13·6
Stepney	277,315	—	34	37	—	5	—	2	23	1	1	103	4·8	—	4	—	—	18	—	4	26	1·2	316	15·8
Poplar	161,597	1	17	10	—	2	—	—	9	2	1	42	3·4	—	1	1	3	8	1	5	19	1·5	188	15·7
South Districts.																									
Southwark	190,017	—	31	9	—	6	—	2	16	2	—	66	4·5	—	12	—	1	8	—	5	26	1·8	255	18·3
Bermondsey	125,260	—	31	18	—	1	—	—	15	—	3	68	7·1	—	7	—	—	2	—	2	11	1·1	152	16·2
Lambeth	297,550	—	40	27	—	3	—	3	8	—	—	81	3·5	—	11	2	3	10	1	3	30	1·3	321	14·6
Battersea	167,589	—	28	26	—	1	—	2	9	—	—	66	5·1	—	—	—	6	4	1	2	13	1·0	133	11·0
Wandsworth	321,881	—	45	51	—	6	—	3	15	—	—	120	4·9	—	1	—	1	13	1	5	21	0·9	238	10·1
Camberwell	261,591	—	36	21	—	1	—	2	14	—	—	74	3·7	—	6	1	2	3	—	4	16	0·8	268	13·9
Deptford	109,377	—	36	10	—	1	1	2	17	—	—	67	8·0	—	—	—	2	1	—	1	4	0·5	104	13·0
Greenwich	95,994	—	31	19	—	—	—	—	12	—	1	63	8·6	—	4	—	1	—	—	—	5	0·7	97	13·5
Lewisham	165,249	—	19	41	—	2	—	1	8	1	1	73	5·8	—	—	—	3	2	—	4	9	0·7	141	11·6
Woolwich	121,932	—	28	28	—	2	—	—	5	—	—	63	6·7	—	3	—	3	1	—	—	7	0·7	107	12·2
Port of London	—	1	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including membranous croup. † The death-rates are corrected for variations in sex- and age-constitution of the populations of the several boroughs, the population of England and Wales being taken as the standard. ‡ Deaths from "typhus fever" and "other continued fevers" are not now distinguished in the Registrar-General's weekly returns; these two columns are therefore omitted from the Table.

the boroughs in which the deceased persons had previously resided; the death-rates at all ages are further corrected for variations in the sex- and age-constitutions of the several boroughs. During the four weeks ending March 30th the deaths of 4596 London residents were registered, equal to an annual rate of 14·0 per 1000 of the population; in the three preceding months the rates had been 16·1, 16·3, and 17·9 per 1000 respectively. The death-rates last month ranged from 10·1 in Wandsworth, 10·6 in Hammersmith, 11·0 in Battersea, and 11·6 in Hackney and in Lewisham, to 16·2 in Finsbury and in Bermondsey, 17·5 in Holborn, 17·7 in Chelsea, and 18·3 in Southwark. The 4596 deaths from all causes included 311 which were referred to the principal infectious diseases; of these, 79 resulted from measles, 8 from scarlet fever, 41 from diphtheria, 106 from whooping-cough, 6 from enteric fever, and 71 from diarrhœa and enteritis among children under 2 years of age. No death from any of these diseases was recorded last month in Stoke Newington or in Holborn; among the other metropolitan boroughs they caused the lowest death-rates in Kensington, Chelsea, and Hammersmith, and the highest rates in the City of Westminster, Stepney, Poplar, Southwark, and Lambeth. The 79 deaths from measles were 233 below the corrected average number for the corresponding period of the five preceding years; this disease was proportionally most fatal last month in the City of Westminster, Islington, Southwark, Bermondsey, Lambeth, and Greenwich. The 8 fatal cases of scarlet fever were 23 fewer than the corrected average number, and included 3 in St. Marylebone, and 2 in Lambeth. The 41 deaths from diphtheria showed a decline of 22 from the corrected average number; the greatest proportional mortality from this disease was recorded last month in Hampstead, Poplar, Battersea, Deptford, Lewisham, and Woolwich. The 106 fatal cases of whooping-cough were 53 below the corrected average number; this disease was proportionally most fatal in Stepney, Poplar, Southwark, and Wandsworth. The 6 deaths from enteric fever were equal to half the corrected average number, and belonged respectively to St. Marylebone, Bethnal Green, Poplar, Lambeth, Battersea, and Wandsworth. The mortality from diarrhœa and enteritis among children under two years of age was proportionally greatest in Fulham, St. Marylebone, St. Pancras, Shoreditch, Poplar, Southwark, and Lewisham. In conclusion, it may be stated that the aggregate mortality in London last month from the principal infectious diseases (excluding diarrhœa) was 58 4 per cent. below the average.

* Including membranous croup. † The death-rates are corrected for variations in sex- and age-constitution of the populations of the several boroughs, the population of England and Wales being taken as the standard. ‡ Deaths from "typhus fever" and "other continued fevers" are not now distinguished in the Registrar-General's weekly returns; these two columns are therefore omitted from the Table.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

IN accordance with the provisions of Order in Council of April 1st, 1881, Staff-Surgeon Henry William Melville Rees has been placed on the Retired List (dated March 31st, 1912), and Fleet-Surgeon Charles Samuel Facey has been placed on the Retired List at his own request.

The following appointments have been notified:—Fleet-Surgeons: J. C. Ferguson to the *Russel*, and as Acting Interpreter in French; and P. H. M. Star to the *Jupiter*, and for group of ships of Fourth Division Home Fleet.

ROYAL ARMY MEDICAL CORPS.

Surgeon-General T. M. Corker has taken up duty as Principal Medical Officer of the Sixth (Poona) Division of the Southern Army in India.

Lieutenant-Colonel J. B Wilson has been appointed Senior Medical Officer in Jamaica. Lieutenant Colonel B. Skinner, M.V.O., on return from a tour of service in India, has been selected to officiate as Director of Studies and Commandant at the Royal Army Medical College, Grosvenor-road, during the absence on leave of Colonel E. Risk.

Major H. J. M. Buist has been transferred from Pretoria to the Military Hospital at Bloemfontein for general duty. Major F. Kiddle has been transferred to the Eastern Command for duty in the Colchester District. Major B. B Burke has been detailed for service at Sierra Leone. Major J. W. Houghton has taken up duty in Medical Charge of the Suffolk Regiment on strike duty at Wigan. Major F. G. Richards has been appointed to the Irish Command for duty in the Cork district. Major C. S. Smith has embarked for service in India. Major J. Mangin, specialist in ophthalmic surgery to the Aldershot Command, has taken up duty at Leigh in Medical Charge of the Royal Fusiliers, at present employed on strike duty. Major J. M. Sloan has been transferred from Aberdeen to Quetta for duty with the Indian Establishment. Major H. G. F. Stallard has been transferred from Peshawar to Nowshera for duty at the Station Hospital. Major E. B. Knox has left Norwich in Medical Charge of the 16th (The Queen's) Lancers for duty in connexion with the coal strike at Wigan. Major E. C. Freeman has been granted an extension of one year in his appointment as Deputy Assistant Director of Medical Services to the East Anglian Division. Major P. H. Falkner, on return from Bermuda, has been appointed for temporary duty as Recruiting Medical Officer in the London district.

Captain E. W. Powell, on completion of a tour of foreign service at Aden, has been appointed to the Cork district. Captain H. T. Stack has left Belfast for service in India. Captain O. Ievers has been transferred from Wynberg to Dublin. Captain H. O. M. Beadnell has been appointed for duty at the Military Hospital, Chester. Captain H. G. Sherren has been transferred to the Aldershot Command. Captain V. H. Symons has been detailed for duty at Belfast. Captain C. F. White has been posted to the Southern Command. Captain M. J. Cromie has joined the Dublin District. Captain A. S. Littlejohns has been transferred from Pretoria to the Military Hospital at Wynberg. Captain R. E. U. Newman has been appointed to the Station Hospital at Rawal Pindi cantonment. Captain G. B. Edwards has been appointed to the Southern Command. Captain A. C. Amy has been appointed to hold Civil Medical Charge at Ranikhet in addition to his military duties. Captain E. V. Aylen has been granted eight months' general leave of absence home from India.

The following Lieutenants have embarked at Southampton for a tour of duty in the South African Command:—G. P. Taylor, H. R. Edwards, R. M. Davies, R. C G. M. Kinkead, A. W. Bevis, O. W. McSheehy, M. J. Williamson, C. L. Franklin, and H. F. Joynt. Lieutenant F. W. M. Cunningham has been transferred from the Curragh to the Indian Establishment for duty at the Station Hospital, Rawal Pindi. Lieutenant E. C Stoney has joined for duty at the Station Hospital, Bangalore. Lieutenant T. W. Stallybrass has been appointed to the Military Hospital at Cairo. Lieutenant W. T. Graham has been transferred from Oxford to Worcester. Lieutenant C. H. H. Harold has taken up duty as Assistant Medical Officer at the Guards Depôt, Caterham. Lieutenant H. G. Monteith has been stationed at Aldershot, and Lieutenant J. S. Levack and Lieutenant T. C. R Archer have been posted to Lichfield and Woolwich respectively. The following Lieutenants, on completion of their probationary period at Aldershot, have been appointed to Woolwich:—B. H. H. Spence, R. Davidson, and S. P. Sykes.

INDIAN MEDICAL SERVICE.

Lieutenant-Colonel A. Coleman has been selected for appointment as Civil Surgeon at Rawal Pindi.

Major F. A. L. Hammond has assumed duty as Civil Surgeon at Maymyo, in succession to Major C. R. Pearse. Major M. Dick has been appointed to hold Civil Medical Charge at Meiktila, in succession to Captain H. A. Dougan, transferred to Rangoon. Major S. Anderson has been granted an extension of his leave of absence home from India by the Secretary of State. On completion of duty as officiating professor of surgery at the Medical College, Calcutta, and surgeon to the College Hospital, Major E. O. Thurston has been appointed Civil Surgeon at Burdwan. Major J. L. Macrae, on return from furlough, has taken up duty at Kurnool as District Medical Officer. Major E. F. J. Tucker has been appointed to officiate as Presidency Surgeon, Second District, and Marine Surgeon, Bombay. Major W. H. Kenrick, officiating Sanitary Commissioner of the Central Provinces, has been granted 12 months' leave of absence home from India.

Captain H. C. Buckley has been appointed Plague Medical Officer at Rohtak. Captain C. C. C. Shaw has been appointed to officiate as Civil Surgeon, and posted to the Raipur District. Captain J. W. W. Jeudwine, who has recently acted as civil surgeon of Simla West, has been granted two years' furlough. Captain K. S Singh has taken up duty at Amritsar. Captain N. W. Mackworth has relinquished charge of the jail at Burdwan to Major E. O. Thurston. Captain A.

Cameron has been appointed for duty at Gurdaspur. The services of Captain J. E. Clements have been placed at the disposal of the Government of the United Provinces for employment in the Jail Department. Captain N. S. Sodhi has joined for duty at Ludhiana.

SPECIAL RESERVE OF OFFICERS.

Royal Army Medical Corps.

David Murray Lyon, late Cadet Colour-Sergeant, University of Edinburgh Contingent, Officers Training Corps, to be Lieutenant (on probation) (dated March 4th, 1912).

TERRITORIAL FORCE.

Royal Army Medical Corps.

Attached to Units other than Medical Units.—Captain Edward T. Collins to be Major (dated March 25th, 1908). Lieutenant Archibald R. Paterson to be Captain (dated Dec. 7th, 1911).

COLONIAL MEDICAL SERVICES.

West African Medical Staff.—Dr. J. Cross, medical officer, Southern Nigeria, has resigned his appointment. Mr. A. J. A. Browne, medical officer, Southern Nigeria, has retired with a gratuity. Dr. J. Lunn, medical officer, Gold Coast, has been appointed an Itinerating Inspecting Officer in the Medical Department of Ceylon. The following new appointments have been made: Mr. M. Groves and Dr. F. G. Thompson to be Medical Officers, Gold Coast. Mr. W. Browne to be Medical Officer, Southern Nigeria. Mr. W. C. E. Bower to be Medical Officer, Sierra Leone (reappointment).

Other Colonies and Protectorates.—Dr. H. G. Holdbrook, Dr. N. W. Steinberg, Dr. W. A. Taylor, and Mr. J. A. McIlroy, to be Medical Officers, Straits Settlements. Mr. H. W. Tilling, to be Medical Officer, Gilbert and Ellice Islands.

ITALIAN ORDERS FOR BRITISH NAVAL OFFICERS.

The King has granted to the undermentioned Naval Officers His Majesty's Royal licence and authority to accept and wear decorations stated against their names which have been conferred upon them by the King of Italy, in recognition of valuable services rendered by them at the time of the earthquake in Southern Italy in the year 1908:—

Insignia of Commander of the Order of St. Maurice and St. Lazarus.—Deputy Surgeon-General James O'Brien Williams.

Insignia of Officer of the Order of St. Maurice and St. Lazarus.—Staff-Surgeon Percy Temple Sutcliffe, Staff-Surgeon Elystan Glodrydd Evelyn O'Leary, Staff-Surgeon Frederick Francis Mahon, and Staff-Surgeon John Scarborough Dudding.

Insignia of Commander of the Order of the Crown of Italy.—Fleet-Surgeon Percy Edmund Maitland, Fleet-Surgeon Arthur Edward Kelsey, Fleet-Surgeon Edward Henry Hodnet de Courtmacsherry, and Fleet-Surgeon William John Colborne.

Insignia of Officer of the Order of the Crown of Italy.—Staff-Surgeon Percival Thomas Nicholls, Staff-Surgeon Pierce Leslie Crosbie, Staff-Surgeon Reginald Thompson, Staff-Surgeon Robert Kennedy, Surgeon Hugh Bernard German, Surgeon Frederick George Wilson, Surgeon Horace Bryden Hill, and Surgeon William Charles Carson.

DEATHS IN THE SERVICES.

Inspector-General Sir James Jenkins, K.C.B., R.N. (retired), on April 5th, aged 93 years. Sir James Jenkins, who was honorary surgeon to the King, entered the navy as assistant surgeon in 1841, became surgeon in 1854, staff-surgeon in 1863, deputy inspector-general of hospitals and fleets in 1872, and inspector-general in 1878. He served as medical officer in charge of the naval brigade before Sebastopol, 1854–55, and from 1857 to 1861 he was in charge of the hospital ships *Belleisle* and *Simoom* in China. Subsequently he served as deputy inspector-general of the Naval Hospital, Bermuda, and of the Royal Naval Hospital at Plymouth. He was made a C.B. in 1867 and a K.C.B. in 1887. He retired in 1878.

JOURNAL OF THE ROYAL ARMY MEDICAL CORPS.

The subject of the treatment of syphilis by salvarsan has received considerable attention by medical officers of the Royal Army Medical Corps, and the current issue of the Journal of the corps contains a contribution from the pen of Captain A. T. Frost detailing his experiences at the Dublin Royal Infirmary. Among his conclusions are the statements that "if men could be induced to report themselves as soon as the disease becomes manifest, the prophylactic treatment by '606' would constitute an important advance in the treatment of syphilis," and "in the selected lives met with in the services very few would present contra-indications to the use of salvarsan." A criticism of the substitution of the intravenous injection of quinine in place of the intramuscular forms the subject of a paper by Major F. J. Palmer, and while showing that an intravenous injection may occasionally be a very difficult if not impossible matter he puts forward a plea for untrammelled clinical action in cases of extreme gravity. Some notes on cases of bilharzia hæmatobia, collected at the Royal Hospital, Chelsea, are contributed by Lieutenant-Colonel R. J. C. Cottell, and field cooking is discussed by Lieutenant-Colonel H. E. R. James, C.B., who remarks that this is a subject of special importance to the medical officer, since much of the disease of armies in the field is predisposed to by faulty food and monotony of diet, while waste of good material is caused by the inability to make it appetising. The matter is also one closely connected with the care of the sick and wounded. A translation of "Anleitung für die Kriegschirurgische Tätigkeit auf dem Schlachtfelde," the Austro-Hungarian regulations regarding the surgical work which is permitted on the battlefield, is commenced by Colonel W. G. Macpherson, C.M.G., and the interesting article by G. Fahey, an ex-soldier, on "Practical Hints on Marching and Health on Active Service" is continued, the present contribution dealing with the care of the feet.

ANNUAL REPORT OF THE SURGEON-GENERAL OF THE PUBLIC HEALTH AND MARINE HOSPITAL SERVICE OF THE UNITED STATES FOR 1911.

This report, which is issued from the Government Printing Office at Washington, D.C., is the last report of work done under the direction of the late Surgeon-General Walter Wyman, and the fortieth annual report of the service in the 113th year of its existence. The Bureau in Washington contains seven divisions through which the widely varied operations of the service are conducted—viz.: (1) Scientific research and sanitation; (2) foreign and insular quarantine and immigration; (3) domestic (interstate) quarantine; (4) sanitary reports and statistics; (5) marine hospitals and relief; (6) *personnel* and accounts; (7) miscellaneous. Each division is under the charge of a medical officer of the service, the several functions being coördinated under the direct personal supervision of the surgeon-general. In the first division the report deals with typhoid, Rocky Mountain spotted fever, cerebro-spinal fever, and acute anterior poliomyelitis, tuberculosis, rabies and antirabic treatment, hookworm disease, leprosy, mine sanitation, and so forth. Anti-typhoid vaccination, we learn, having been successful in the United States army, has been tentatively introduced into the Marine Hospital Service. Attention is called to Dr. Lavinder's investigations which show that clinically the Italian and the American pellagra are the same disease, but that the disease in America is more severe than in Italy, and the mortality is higher. Among the conclusions drawn as to cerebro-spinal fever as it appeared in the Savannah, Ga., epidemic, it is stated that direct contact with the sick was a relatively small, though not altogether negligible, factor in the spread of the disease, and that the influence of carriers in the spread of the epidemic could only be inferred. In certain cases of poliomyelitis, it is stated, the clinical appearances are so similar to those of epidemic cerebro-spinal meningitis that the differentiation can be made only by lumbar puncture. The prognosis of poliomyelitis is graver when the paralysis affects the arms alone than when it affects the legs only, and when both legs or arms are affected than when only one extremity is involved. In observations on tuberculosis at Fort Stanton, N.M., in which the patients were at the sanatorium for one year before and after the treatment, which occupied several months, under constant climatic and hygienic conditions, no influence on the general course of the disease was noted after tuberculin B.F., "tuberculinum purum," or deep muscular injections of mercuric succinimide. The report contains much interesting matter as to the geographical distribution of disease throughout the world.

Correspondence.

"Audi alteram partem."

PSYCHIATRY IN ENGLAND: ITS PRESENT STATE AND ITS OUTLOOK.

To the Editor of THE LANCET.

SIR,—I would not willingly let the opportunity afforded by your timely and important article on the above subject pass. I have read the articles by Dr. Rows and Dr. Orr upon which it was based, as also the excellent letter of Dr. Bedford Pierce in your last issue. With your permission I propose to keep the ball rolling. I take it that the psychiatric clinique is a *chose jugée*. It is indispensable. A country which has it not is, in matters psychiatric, not a leading country. To anyone needing information on the subject I would recommend the annual reports of the Royal Psychiatric Clinique at Munich, published since its opening in 1904. A succinct account of such cliniques is given by Dr. Rows in his paper, to which you refer your readers. Is it not a little humiliating that one of the subjects selected for discussion in the Section of Psychiatry of the International Congress of Medicine, 1913, should be "The Psychiatric Clinique, its Aims (Educational and Therapeutic), and the Results Obtained in respect to Promotion of Recovery"? I am far from blaming those (amongst whom I happen to be one) who prepared for us this cup of bitterness. If by this means the advent of these cliniques in this country is to be hastened, I, for one, am prepared to swallow the dose, feeling strongly, as I do, that psychiatry here will make no progress worth the name until they are widely established. We should have them in every university town of the Kingdom. Does this mean State or municipal control of our infirmaries and hospitals? Here we are at once *in medias res;* in a veritable Bay of Biscay of controversy. We shall have need of our sea-legs. Let all the wobblers and the squeamish go below deck forthwith. For who are the mysterious "authorities" whom we have to "educate up" to this thing? Who is to find the money to build, equip, and maintain these wings; to tack on these pavilions of psychiatry to our sorely pressed voluntary hospitals? Such block or pavilion must, in respect to *locale* and to working, be closely associated with the other medical departments of the hospital. It is difficult to conceive of the county or borough council controlling one department and the usual committee of management, representing founders and subscribers, controlling the rest.

We are told the voluntary system is to go. In that case the poor "lunatic" may at length come into his own (pavilion). They have, indeed, much to answer for who applied (and who perpetuate) the unhappy terms "asylum," "lunatic," "institution for lunatics," "superintendent," "manager," &c., to the insane and their circumstances; who caused recent and curable cases to be "certified," received on "summary orders," and segregated (along with their doctors) in out-of-the-way country places. Lawyer-politicians, Parliamentary draughtsmen, red-tapists, bureaucrats—these and their like worked it; and not all the power of invective, satire, and ridicule of all the masters, past and present, could adequately denote the measure of their incompetence and iniquity. "*Die Zeit ist mein Vermächtnus* ....." Have not the heralds proclaimed that this century is to see the end of the rule of the dogmatists, the framers of formularies, the coiners of phrases; that the men of science are at last to come into their "legacy," and to be respected and believed in by the people, even that "practical" Anglo-Saxon folk which has no inherent respect for science as such?

I have a recollection of being told some years since by Sir Thomas Clouston that our longed-for pavilion of light and healing, with associated out-patient department, had very nearly been consummated in connexion with the University of Edinburgh. I am greatly disappointed that the Scotch have failed in this matter to give us their accustomed lead. Much as I resent their lead-giving, and painfully aware as I am of their shortcomings, I am mindful that they have long had a higher appreciation of the value of education than the other nationalities of this Kingdom; that they have made noble sacrifices for, and presented great gifts of money to, the cause of education.

And now, may I briefly sketch what I think may be done by way of compromise in the meantime? Let us seek to educate the public authority in control of every institution for the insane which serves a university town to a sense of its peculiar responsibilities. Let the mental hospital committee be duly recognised on the governing board of the University and on the infirmary committee, with the object of promoting close relationships between these various authorities. Let us make legitimate use of the sentiment of local pride, the development of which has perhaps been one of the most valuable results of the system of local government; in its judicious exploitation lie, I believe, great potentialities. We may point out to the mental hospital committee that the education in psychiatry of the students, the post-graduates, the jurists of their university depends upon their action; that this will only be rendered possible by the provision at their institution of all things necessary, such as clinical, pathological, physiological, chemical laboratories and apparatus; a lecture theatre, with teachers in the various spheres, who may in some instances be whole-time workers; in others competent subordinates from the corresponding departments of the University. The resident physicians would provide clinical teaching, and should receive the fees payable by the students. The assistant physicians could give private tuition (the *docent* principle); the senior one could share the course of lectures at the University with his chief. The resident physicians (they, and assistants in general, would receive their training for the diploma in psychiatry at such a hospital) would obviously, in time, be of a degree of competence and a value far above the average, and would have to be paid accordingly. The patients would benefit enormously by the enhanced ideals and higher level of efficiency of the medical (and nursing) staff, which would need to be stronger numerically than the average, and would be supplemented by resident clinical assistants (candidates in psychiatry) from the medical school. There would also be the qualified young men who are carrying out a piece of research work with a view to their own advancement in the specialty. Imperial grants should in time be available for the prosecution of specific researches, which are mainly in the Imperial, and not merely the local, interest. And why should the mental hospital not have its private benefactors, to promote by their gifts the cause of research? There should be an out-patient department. Is it optimistic to believe that all these measures would promote public confidence and result in the earlier admission of cases?

Of course, such a scheme is far from the equivalent of the clinique as regards the interests alike of patients and of students; and more especially it does not allow of that free coming and going of patients, that absence of registration and certification, which constitutes one of the greatest advantages of the clinique.

The medical director of the university mental hospitals should have the respect and confidence of his junior colleagues by virtue of his professional attainments and character. A beginning could be made in these institutions by way of ridding our service of the anomaly and anachronism whereby a man trained for the medical profession finds his energies largely employed in stewardship and administration. And here, I would say, let the steward be a gentleman of the social standing of the doctor, and the bogy of friction from dual control will vanish.

As regards the position of assistant medical officer (he should be called "assistant physician") in our asylums, space will only allow me to say that I believe every asylum hereafter to be built, or even new building, no matter how small, should provide a house on the estate for the senior assistant and sufficient means for him to marry upon. The senior might be allowed consulting work (in the boroughs there is some to be had). In order justly to appraise the grievances of the assistants in our asylums I think committees would like to know how their conditions compare with those of the juniors in other public and State services. I should be glad to understand what precisely Dr. Orr and those who support him mean when they say a permanent assistant should have "legal recognition." After all, this is a mere phrase. In respect to what functions, in what directions, to what extent, is this claimed? How would the claim affect the medical superintendent in his status and

his responsibilities? Even this exalted mandarin has his feelings, and would like as far as possible to be a consenting party to his own mutilation.

I am, Sir, yours faithfully,

EDWIN GOODALL.

City of Cardiff Mental Hospital, April 15th, 1912.

THE FORMATION OF LOCAL MEDICAL COMMITTEES.

To the Editor of THE LANCET.

SIR,—Provisional Medical Committees have been formed for the boroughs of Deptford, Greenwich, and Lewisham, which together form the Greenwich Division of the British Medical Association. At the first meeting of the Lewisham Provisional Medical Committee, which was held on April 4th, as announced in your columns, Dr. C. T. T. Comber was elected chairman and Dr. Edgar Du Cane appointed honorary secretary. The following rules and regulations were adopted:—

1. That the committee shall not have power to deal with matters other than those pertaining to the National Insurance Act.
2. That the Council of the Metropolitan Counties Branch of the British Medical Association or a committee appointed by it for the purpose be recognised as the coördinating centre, and that the committee shall not enter into any dealings with the authorities under the Act nor seek recognition from any such authority until it has received the sanction of the Branch Council for so doing.
3. That the committee shall not apply for the sanction of the Branch Council for the purpose mentioned in Rule 2 until it shall have called a meeting of all medical practitioners resident in the borough and obtained the sanction of that meeting for so doing.
4. That the committee shall keep the Branch Council fully informed as to its course of action and the results obtained in order that the various divisions may be brought as much as possible into line.
5. That the committee be compelled to call a meeting of all the medical practitioners in the borough within 14 days of the receipt of a requisition to that effect signed by at least 20 of the medical practitioners in the borough who shall give satisfactory security for the expenses of that meeting.
6. That the committee be empowered to call at any time a meeting of all the medical practitioners resident in the borough.
7. That the committee be empowered to fill any vacancies that may occur upon the committee.

Subcommittees for (1) Blackheath and Lee, (2) Brockley, Forest Hill, and Sydenham, and (3) Catford and Lewisham were appointed to organise the local profession and secure united local action. It was decided to ask every medical practitioner in the borough to subscribe 5*s.* towards the expenses of the committee. A local guarantee was drawn up "not to accept any work under the Act, nor any other medical contract work at lower terms than those acceptable to the committee and sanctioned by the British Medical Association."

I am, Sir, yours faithfully,

EDGAR DU CANE, B.A., M.B.,
Honorary Secretary.

177, Brownhill-road, Catford, S.E., April 15th, 1912.

THE BED ISOLATION OF CASES OF INFECTIOUS DISEASE.

To the Editor of THE LANCET.

SIR,—I must thank Dr. F. G. Crookshank for his kind appreciation of the preventive work done at Plaistow Hospital. My letter, I can assure him, was not intended to raise the question of absolute priority as regards bed isolation. That he applied and developed the method some years ago is well known, but as he himself remarks, Dr. Rundle and Dr. Burton have been able to do at Fazakerley Hospital what he wishes he could have done; in other words, they have shown, with not much room for doubt, that under given conditions the system is safe.

It did not seem to me that Dr. Crookshank was sneering at the barrier. On the other hand, I felt that having hit on the term "symbolic" he was making too much of its connotations. That this was the case is made plainer by his further explanation, and I need only say that his theory of a dwindling utility as applied to physical barriers in general is not borne out by experience.

Dr. F. Thomson takes somewhat similar ground relative to partitions and asks a question. My statement that, admitting a standard of nursing short of the best, partitions are safer than the barrier or bed isolation is based on comparative results obtained respectively with barrier and cellular nursing at Plaistow Hospital. There is no theory to back these results, which are empirical in so far as they differ, but none the less convincing on that account.

The isolation block at Plaistow Hospital is built on the cellular plan, small wards opening side by side on to a common landing. Except that the landing is partly open to the air, there is no point of difference from glass cells, and as aerial convection can now be excluded as a factor in cross-infection, except possibly in rare instances, this one point is immaterial. Varnished brick walls between the wards have no preventive virtue as against glass ones. Nurses are not selected from the staff for the barrier and the isolation block; they differ in efficiency, and, as some are beginners, widely, of course, in experience. The sisters keep to their divisions, but the other nurses are frequently moved, and while the barrier is in use throughout the hospital, at one time or another every nurse works in the cellular block. Further, the sister of this block is not chosen for the quality of her preventive nursing, as other duties go with the post. During the time in question six sisters, varying in capacity, have been in charge. The preventive methods used for the barrier, again, are such that they can be, and are, applied in every detail to cellular nursing.

So, the nursing being of the same quality and the methods the same, if different results are yielded by barrier and cellular work, this difference can only be attributed to one factor: the infections dealt with in the isolation block are in separate compartments. Such a difference does exist, and it is important to note that it has been consistently maintained for a period of ten years. When the barrier was in its earliest stage, limited in scope and often unsuccessful, the cellular system did more, although not what it does now. Meanwhile preventive nursing has greatly improved, but is not at its best, because there is no selection of nurses, and the preventive chain is no stronger than its weakest links. To-day, it is still unsafe to barrier scarlet fever, and attempts to isolate measles through the developed stage by its means, or to control chicken-pox, do not succeed. Yet this failure is on the part of the same nurses who, in the cellular block, handle the common fevers, including chicken-pox, measles, and scarlet fever, with safety and employ the same methods. There has been no instance of cross-infection in the division for several years. Before a systematic barrier was thought of the treatment of irregular infections in side wards, in contrast with "unit" nursing in main wards, where isolated cases were indicated by a red card, foreshadowed this issue. Such diseases as ringworm affecting scarlet fever patients, whooping-cough, and rubella could easily be controlled in side wards, but there was always a chance that they would spread in a main ward. The evidence, therefore, that separation reduces the chance of cross-infection, although the cases are nursed in common, and eliminates it in all the ordinary fevers (except small-pox, with which no tests have been made in this country) if efficiency reaches a certain point, is overwhelming. Absolute efficiency implies the safe isolation of these fevers without separation, and it has been achieved by bed isolation.

I am, Sir, yours faithfully,

Wimpole-street, W., April 12th, 1912. JOHN BIERNACKI.

To the Editor of THE LANCET.

SIR,—In reply to a letter in THE LANCET of April 13th I may say that Dr. Rundle will shortly be reading a paper on the subject of bed isolation before the Royal Society of Medicine, and will then no doubt give his attention to Dr. Crookshank's remarks. In the meantime, however, the statement of the latter that his work has not been frankly acknowledged cannot be passed unnoticed.

In the first place, none of Dr. Crookshank's "details" of bed isolation were "improved upon," because none were adopted from him. The figures given of our work start in January, 1910, while Dr. Crookshank's paper was published in February of the same year. The Fazakerley system had, moreover, been in operation in a modified form for at least a year previously, and must be considered as more a modification of Dr. Biernacki's well-recognised "barrier" isolation system than modelled on Dr. Crookshank's paper. In fact, it was not till our figures were being prepared for publication that Dr. Crookshank's work came before our notice, and seeing that he was unable to give any statistics of diseases treated together in the same ward, or to state

definitely what diseases, except diphtheria, typhoid fever, and erysipelas, he had been prepared to treat together, we did not obtain that assistance he wishes to assume.

The account of the work at Fazakerley was given under Dr. Crookshank's title of bed isolation, as it appeared to have developed along similar lines; also, of only two references to original papers one was made to that of Dr. Crookshank. It is to be regretted that these two proceedings did not give to Dr. Crookshank's work the prominence he desires.

Further, it must be pointed out that the emphasis which he lays on "aerial dissemination," and hence on an attempt to disinfect the throat and nose, is entirely opposed to the results of the Fazakerley system. If aerial dissemination is of such importance as to require this treatment the advantage of glass partitions over simple bed isolation is obvious. For the rest, Dr. Biernacki sufficiently states the case when he says that by the routine cleansing of the mouth, throat, and nose, "while the immediate output of profuse discharge is largely controlled, the chance that the nurses may infect other patients becomes greater." The fact that routine local treatment has been entirely withheld at Fazakerley supports this statement. Dr. Crookshank states that he admits that "routine treatment of throats with watery solutions and a big glass syringe is dangerous and improper." Yet in his original article in THE LANCET he provides each of his patients with a "spray or syringe," and states that izal "shaken up with water or paroleine is used for spraying, syringing, or douching the mouth, nose, &c., every four hours during the first week and three times a day later."[1]

It was probably the memory of this integral part of the plan of Dr. Crookshank, who there laid no stress on oily solutions or on the confining of mechanical cleansing to septic cases, that caused Dr. Biernacki to make the remarks he did on local treatment. Dr. Crookshank's statement that a nurse can spray a patient's nose or throat without "touching the patient" supposes the existence of a type of child and of nurse with which few must be able to claim acquaintance. I am, Sir, yours faithfully,

Liverpool, April 15th, 1912. A. H. G. BURTON.

INTERNAL SECRETIONS AND THE PRINCIPLES OF MEDICINE.

To the Editor of THE LANCET.

SIR,—The review of my work on the "Internal Secretions and the Principles of Medicine," published in THE LANCET of March 23rd, contains statements which, with your kind permission, I should like to amend. I am represented therein as the would-be father of "a new physiology." I must disclaim any such idea. An inveterate antagonist of the empirical methods which disgrace even present-day practice, my purpose has ever been, as editor of the "Annual of the Universal Medical Sciences," of its successor, the "Cyclopedia of Practical Medicine," and of the *New York Medical Journal* (of which I assumed the editorial management last year), and also as a teacher, to encourage the use of analysis, that is to say, of analytic and synthetic reasoning, in applied medicine, with physiology as starting point. That this indicates due appreciation of the value of physiology is self-evident. It was this attitude, in fact, which caused me some years ago to invade its field in the hope of elucidating certain admittedly obscure topics. My associates in the "Annual" having found it impossible to carry out my request concerning the use of analysis in the preparation of their departments, asserting that physiology failed to afford sufficient information upon the functions of the various organs to enable them to do so, my efforts to establish a rational medicine, one in which the relations of cause to effect would be clearly defined, were for the moment thwarted.

Rather than attribute this—to me a most regrettable—result to the weakness of physiology taken collectively, I ascribed it to the possible influence on this auxiliary branch of some obscure, all-embracing function, connected perhaps with the vital process, the absence of which caused confusion in every direction. I deemed it my duty to try at least to discover this hidden factor, and devoted many years, including six spent in Europe, to a systematic research in which practically every branch of natural science was scrutinised. The work reviewed in your issue of March 23rd is the product of this research. Far from pretending to introduce a "new physiology," it aims only to show that when the functions I have attributed to the adrenals, thyroid and parathyroids, and the pituitary body are *added* to the vast array of sound knowledge physiologists have placed at our disposal, the obscurity surrounding many functions, and which obscurity they themselves acknowledge, seems to be dispelled.

Again, your reviewer speaks as though my views had just seen light. It is nine years since the first edition (the present being the fourth) was published. Since then the strength of my deductions has been sustained independently in many particulars. The participation of the adrenal secretion in oxidation and metabolism—so evident in Addison's disease—for example, is no longer subject to doubt; the presence of the adrenal principle in the red corpuscles has also been established; this may also be said of a suggestion which at the time seemed almost preposterous; the fact that emotions, shock, &c., could react on the adrenal system (through its centre, in my opinion), recently confirmed as to the adrenals by Cannon and Hoskins. In the practical field I might cite the confirmation of my view by Fassin, Stepanoff, and Marbé (the two latter working in the Pasteur Institute) that the thyroid (including the parathyroids) not only increased the alexins in the blood, but also its opsonin, which I assimilate to the thyro-parathyroid secretion, a fact of considerable practical importance in the medical and surgical fields.

Finally, permit me to call attention to the fact that the trend and development of the whole question of internal secretions in recent years, and particularly the better results obtained in practice by those who have conscientiously studied my work—all supplemented by the readiness with which obscure functions, pathological states, and the effects of various drugs can be explained—indicate clearly that I did not err when I urged nine years ago that the empiricism which characterises present-day medicine will, to a great extent, disappear when certain internal secretions, especially those of the thyro-parathyroid apparatus and the adrenals, will be regarded as active factors in all vital activities and morbid changes in the body at large, and also as the media through which some of our most useful therapeutic agents, including the bacterial vaccines, produce their beneficial effects. I am, Sir, yours faithfully,

Philadelphia, Pa, U.S.A., April 3rd, 1912. C. E. DE M. SAJOUS.

THE NOMENCLATURE OF DISEASES.

To the Editor of THE LANCET.

SIR,—Sir Clifford Allbutt says that the parasitism of the typhoid microbe is, "in any particular case of typhoid, but one of an infinite complexity of causes." This is the crux of the situation. When we see a patient acutely ill, we correlate the symptom-group shown with the parasitism of a specific microbe, and on the strength of this we "diagnose typhoid fever." Not only is the parasitism of this particular microbe the "cause" of the symptoms; it is the *only possible* "cause" of the typhoid symptom-group. The physician often makes his diagnosis while ignorant of all antecedent conditions; and it is the *antecedent conditions* that are infinitely variable; they are, in fact, never twice alike, but they do not enter into our definition of the concept which we call "the disease typhoid fever." The only essential difference between modern and ancient medicine consists in *knowledge of causation*. This fact is embodied in my definition. "The disease" (typhoid fever, e.g.) is nowadays a mental conception drawn from the observation of a series of symptom-groups of determinate and similar causation. So definite a concept was clearly not attainable prior to Eberth's discovery.

You, Sir, ask me to suggest a generic term to describe concepts drawn from recurrent symptom-groups, uncorrelated with a cause, such as Hodgkin's disease, Graves's disease, insular sclerosis, glaucoma, psoriasis. The word "dyscrasia" was at one time used as a synonym of the specific term "disease"; it has dropped out of our vocabulary. I suggested some six months ago in *Guy's Hospital Gazette* that the word "dyscrasia" should be reintroduced for the purpose of differentiating "spurious diseases" from "true diseases." This would enable us all to realise that to detect a

[1] THE LANCET, Feb. 19th, 1910, p. 480.

"dyscrasia" is not to diagnose "a disease," because the symptoms have not been correlated with their cause.

Your allusion to such a "disease"—as, for instance, measles—does not appear to me to have any bearing on the point in discussion. When innumerable cases of measles "breed true," and with our general knowledge of microbic diseases to guide us, we hardly mislead ourselves in framing "the disease measles." That our position is, in a sense, still provisional we all know. But Hodgkin's disease, Graves's disease, insular sclerosis, glaucoma, psoriasis, *et hoc genus omne*, are obviously in quite a different category, and to my mind therefore indisputably demand the application of a different generic term.

I am, Sir, yours faithfully,

Clevedon, April 13th, 1912. SYDNEY W. MACILWAINE.

THE LEGISLATIVE CONTROL OF PATENT MEDICINES.

To the Editor of THE LANCET.

SIR,—The writer of the interesting article on the Legislative Control of Patent Medicines in your last issue refers to the taxation of medicines in 1714. But the impost is considerably older. The Act of Tonnage and Poundage of 1642 determines the rates to be paid upon merchandise entering or leaving the country, and includes a long list of drugs, among which the following may be mentioned:—

	£	s.	d.
Aloes-cicotrina, the pound	0	5	0
Aloes epatica ,, ...	0	2	0
Arsnick, white or yellow, or Rosalger, the pound	0	0	4
Cantarides ,, ...	0	5	0
Cardamomes ,, ...	0	3	0
Coculus Indiæ ,, ...	0	2	0
Cubebs ,, ...	0	1	4
Diagredium or Scamony, the pound ...	1	0	0
Galbanum ,, ...	0	1	6
Gum Tragagant ,, ...	0	1	0
Jolop the pound	0	4	0
Mercury sublimat ,, ...	0	3	0
Mercury precipitat ,, ...	0	6	8
Musk, the ounce Troy ...	2	0	0
Nux Indica, the piece ...	0	0	6
Nux Vomica, the pound...	0	0	8
Opium ,, ...	0	10	0
Oringe Flower Water, the gallon	0	5	0
Sarsaparilla, the pound ...	0	3	4
Sena ,, ...	0	2	6

The following list is also of interest:—

Instruments for Barbers and Chirurgions.

	£	s.	d.
Bullet scrues, the dozen	0	4	0
Inscition sheeres ,,	0	5	0
Paices or tooth drawers, the dozen...	0	5	0
Plulicanes, the dozen ...	0	5	0
Trepans ,, ...	0	10	0

I cannot find "plulicane" in the ordinary dictionaries.

I am, Sir, yours faithfully,

W. A. BREND.

King's Bench Walk, Temple, E.C., April 15th, 1912.

SUDDEN RECOVERY OF SIGHT: A COINCIDENCE.

To the Editor of THE LANCET.

SIR,—THE LANCET of March 9th, containing the annotation entitled "An 'Apocryphal' Miracle Explained," came to hand on the 25th. On the following day I examined the eyes of a relative and gave as my opinion that cataracts were rapidly developing in both eyes. On the following day, after dinner—she was spending a few days at my home—she came to me and put this question: Do cataracts ever burst so that sight is restored? I may state that she knew nothing of the contents of THE LANCET. Remembering your annotation, metaphorically I pricked up my ears for her answer, and inquired of her, Why do you ask? In reply, she stated that in her young days she knew an old lady who for some years had been so blind that she had to be led about by an attendant, and that on awaking one morning she was heard to cry out, "The cataract has burst; I can see."

My informer assured me that she was absolutely correct as to her blindness, having regularly seen the old lady being led about, and also that she had many times visited her after having recovered her sight and seen her doing ordinary duties requiring vision. In fact, she further told me that many people even from a distance would visit her in order to see for themselves whether she had in fact thus suddenly recovered her sight. My object in publishing the above is this. Now and again we read of persons recovering their sight through prayer and other miraculous ways. Now in all such cases undoubtedly the trouble is cataract, and the cure is brought about through dislocation of the hardened lens, as in the case referred to by you. I may state, as regards the case referred to above, that cataract is a very common trouble in the family.

I am, Sir, yours faithfully,

Barbadoes, March 31st, 1912. R. F. LICORISH, M.D.

CÆSAREAN SECTION FOR DOUBLE MONSTROSITY.

To the Editor of THE LANCET.

SIR,—I have read Dr. Blacker's kindly criticism with pleasure, and quite agree that "if Cæsarean section is chosen it must be certain that in the particular case in question it is the procedure which offers the least risk to the mother."

My point is that in the case in question Cæsarean section was the procedure which exposed the mother to least risk. When I arrived the patient had already been under an anæsthetic for five hours, and one could just count the pulse. It was evident that any interference must be finished quickly. Her condition was such that a heavy post-operative mortality due to infection seemed to me quite a secondary consideration. The problem was how to save her at the moment. Any prolonged or difficult method, such as I considered an embryotomy must have proved in this case, would, I feared, have been fatal at the time. Naturally, in operating every precaution was taken to prevent infection.

The twin in contact with the anterior wall of the uterus was in the left dorso-anterior position. The junction, which was much more massive than the term connecting band implies, was therefore in the plane of the opposite oblique, but higher up. The trunk of the twin placed posteriorly was exactly facing the anterior twin's trunk. The faces were not looking at one another, both necks being flexed and the corresponding ears in contact. The uterus was closely wrapped round the monster.

I am, Sir, yours faithfully,

St. Leonards-on-Sea, April 15th, 1912. DAVID LIGAT.

THE ADMIRALTY TEST FOR COLOUR-BLINDNESS.

To the Editor of THE LANCET.

SIR,—As a member of the Departmental Committee of the Board of Trade appointed to report upon the sight tests in the Mercantile Marine I regret that I am not at liberty to discuss the criticisms contained in Dr. Edridge-Green's letter in to-day's LANCET until the Committee has issued its report, which is not likely now to be long delayed.

I am, Sir, yours faithfully,

J. HERBERT PARSONS.

Queen Anne-street, W., April 13th, 1912.

THE FIFTEENTH INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY.

(FROM A SPECIAL CORRESPONDENT.)

Travelling Arrangements.

THE time is rapidly approaching when those who intend to participate in the Fifteenth International Congress of Hygiene should make their final arrangements. The Congress meets at Washington from Sept. 23rd to 28th. At that time of year ships crossing the Atlantic are very crowded, and it is necessary to secure berths far in advance. But the Germans, learned in the science of military organisation and trained to the sense of discipline, have developed travelling in company formation into a fine art. Thus we are not surprised to hear that they have already chartered a special ship, the *Cincinnati*, which is due to sail from Hamburg on Sept. 7th or 8th with some 300 German members of the congress. The arrangement is that each member pays a fixed sum, varying from £85 to £125, according to the cabin occupied. This sum covers all the expenses incurred on land as well as on sea, excepting drinks and tips. Only a

very few berths now remain free on this ship and it is not likely to carry other passengers besides members of the congress, but they need not all be of German nationality. On the other hand, it would be dull for the passengers who did not speak German, particularly as the passage will be long, probably ten days. Professor Hoffmann, general secretary of the German National Committee, is the chief organiser for this excursion, and his address is Berlin N.W. 40, Scharwhorstrasse 35. No doubt the British committee will soon issue a circular explaining what arrangements they have made.

American Exhibition of Hygiene.

The American general secretary, Dr. J. S. Fulton, Senate Annex, Washington, D.C., announces an American Exhibition of Hygiene to be held in connexion with the Congress, the exhibition opening early in September. Some 26 federal bureaux connected with hygiene or vital statistics have already announced their intention to participate in the exhibition. Thus members of the Congress will be more easily able to see what progress in sanitation has been accomplished. Representatives from 24 nations have notified their intention of being present, and other countries are sure to follow this example. Some 40 years have now elapsed since the first of these congresses met at Brussels, but they have never yet been held on American soil. President Taft is the honorary president of the Congress. The State department is lending its assistance, and Mr. Huntington Wilson, First Assistant Secretary of State, is chairman of the Committee of Organisation. Dr. Henry P. Walcott has been selected to act as President of the Congress.

Buildings, it appears, are specially erected for the Health Exhibition in Potomac Park. The exhibition is under the special charge of Dr. Joseph W. Schereschewsky of the United States Public Health and Marine Hospital Service. The establishing of sanitary working conditions, which has rendered the construction of the Panama Canal possible, will be the subject matter of an important section of this exhibition. Efforts will also be made to show how it is proposed to prevent the Panama Canal becoming a centre of infection after it is open. It is further intended to profit by the Congress to secure better or more uniform methods permitting international comparison of vital statistics. This is much needed, especially in the United States. Thus it will be seen that American reformers realise that one of the objects of these congresses is to stimulate sanitary reform in the countries where they are held.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Detection and Destruction of Diseased Meat at the Docks.

FROM the annual report of the medical officer of health to the port sanitary authority (Mr. W. F. Dearden) I take some interesting details regarding the work of testing the quality of food supplies at the Manchester docks. During the past year the value of food imports was £7,730,289. On the whole the quantity of foodstuffs condemned was comparatively small. Experience showed that most careful inspection is necessary in connexion with foreign meat imports. Five barrels of ox-tongues, on being examined, showed that a number of the tongues had had pieces cut out of them, a condition suggesting removal of offensive or diseased parts. About 3½ tons of bacon, purporting to be of Dutch origin and coming from Antwerp, on being opened was found to have the appearance of having been boiled, while in some cases decomposition had set in. There has been an improvement in the condition of tinned food arriving at the docks. The strike last autumn is responsible for an increased number of condemnations of fruit and vegetable supplies. An interesting item is noticed in connexion with the large trade in condensed milk. Milk powder, which is obtained by complete evaporation of the watery part of milk, is now being brought regularly into the port. Frequent examinations of this import have been made, but no fault was found with its condition.

A Guardians' Sanatorium: Lead by South Manchester.

The South Manchester Guardians' Sanatorium at Abergele was formally opened on April 13th by Mr. G. Macfarlane, the chairman of the board. Originally it was a private residence and there was some litigation before permission was given to obtain and convert the property into a sanatorium. It is arranged at present to accommodate 50 patients, but provided the consent of the Local Government Board be obtained, the facilities are such that at a comparatively small cost a much larger number of inmates can be accommodated. The estate embraces about 287 acres of land, and is situated on the eastern slope of the valley of the Gele. It has two farmsteads, one large hall, and five bungalows. It is 350 feet above sea level and three and a half miles from the sea. There are several miles of footpaths of different gradients—in fact, it is an ideal health spot standing in the midst of beautiful scenery. The price paid for the estate was £12,600, while the total cost to the ratepayers is about £14,000, which is less than half of what the former owner expended on the buildings alone. The South Manchester board deals with an area which contains 400,000 people, and as they had no accommodation of their own for phthisical cases they were forced to all sorts of expedients to obtain the necessary accommodation in other sanatoriums for their consumptive patients. This cost £5000 per annum, and at best they were dependent on the good offices of other boards. This judicious investment will enable the same number of patients to be treated as formerly at a cost of £3000, instead of £5000 as at present. By this action of an administrative body dealing with a densely populated area there will be no necessity for curable cases of phthisis to remain in the area for lack of proper accommodation in healthy surroundings. It is intended that only cases in the early stages shall be sent to Abergele; the more advanced cases will be treated elsewhere. The medical superintendent, Dr. Craig, will attend in Manchester twice a week to examine applicants. If evidence of consumption is disclosed the applicant will be sent as soon as possible to the institution. The sanatorium is not to be exclusively for the poor, nor is it to be a pauper institution. A person earning a certain wage will be allowed on payment of a fee to send for treatment one of his family who may be a sufferer. Altogether the scheme is a most commendable one.

Dock Rats and Trypanosomes.

For some time experiments on Manchester dock rats have been carried on by the medical officials of the port sanitary authority. Mr. Dearden has conducted an examination on 100 rats, and has found trypanosomes in the blood in 23 cases. It is well known that the blood of almost all vertebrates, from fishes upwards, contain specific trypanosomes. During the year 8623 rats found on 137 vessels were killed at the docks, making a total of 54,313 for the past six years. In one month as many as 1041 rats were caught on nine ships. Mr. Dearden makes the following significant comment on the difficulties in dealing with canal boat inspection:—

> The canal boats provide a constant means of communication between Manchester warehouses and foreign vessels outside our own port. It would appear important that they should be kept in a sanitary condition and freed as far as possible from the risk of importing disease. The danger of bringing infected rats up to Manchester by this medium cannot be disregarded.

The bacteriological examination of 100 rats showed that—

> No bacilli suggesting plague were discovered in any of the bodies, but in six cases parasitic cysts of the liver were found; in only one case were bacilli of a possibly pathogenic nature seen, but of course not plague-producing; in 19 cases putrefactive bacilli or cocci were discovered; in 23, trypanosomes were found in the blood.

April 16th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Meath Hospital, Dublin.

Mr. Henry Stokes, F.R.C.S.I., has been elected surgeon to the Meath Hospital and County Dublin Infirmary. The annual report of the hospital presented to a meeting of the governors last Monday disclosed a serious financial condition. The deficit in the year's working was £1066 16*s.* 8*d.*, leaving a present balance against the hospital of £7528 17*s.* It was stated that the National Insurance Act had already affected the subscriptions to the institution, and a further falling off was expected. 1576 patients were treated in the wards during the year, of whom 119 died. The average

daily number of beds occupied was 110·93. There were 10,160 accident cases treated as out-patients and 10,489 dispensary cases.

Unfortunate Occurrence in a Workhouse Ward.

An unusual incident occurred recently in Corofin Workhouse, resulting in some of the old inmates receiving serious injuries, and in the case of one woman these had a fatal termination. On the morning of April 1st an inmate, a woman of remarkable physique and stature, and subject to epileptic seizures, suddenly became insane, and getting out of bed about 3 o'clock in a state of frenzy, made a murderous attack upon the old and feeble women in the ward with whom she had been classed. The only weapon on which she could lay hands was a chair, and with this she attacked the old women. The night nurse was powerless to restrain her, and the attempts she made to do so were repelled. The nurse, however, procured, after some time, the assistance of some male inmates from the main house. One old inmate has succumbed to the injuries inflicted upon her, whilst two other old women, who also received somewhat serious injuries, are still suffering.

Newry General Hospital.

Dr. C. E. Maud, of Newry, was, at a meeting of the committee of management of the Newry General Hospital held on April 11th, appointed medical officer in place of the late Dr. Beamish.

Emigration from Ireland.

During the year 1911 the total number of emigrants from Ireland was 31,058 (17,035 males and 14,023 females). Of the males 16,671, and of the females 13,902, were natives of Ireland, the total number 30,573 being equivalent to a rate of 7·0 per 1000 of the population estimated to the middle of the year, and showing a decrease of 1884 as compared with the year 1910. In the province of Leinster there is, as compared with 1910, a decrease of 63, in Munster a decrease of 647, in Ulster a decrease of 239, and in Connaught a decrease of 935 emigrants. Of the 30,573 natives who left Ireland last year, 4195 were from Leinster, or 3·6 per 1000 of the population of the provinces; 7683, or 7·4 per 1000 from Munster, 12,032, or 7·6 per 1000 from Ulster; and 6663 or 10·9 per 1000 from Connaught. The number of natives who emigrated during 1911 with the intention of settling permanently in Great Britain was 2015. Of the total 1604 left for England and Wales, and 411 for Scotland, as against 1950 and 924, the respective averages for emigrants to those countries for the four years preceding. Of the number who went to England and Wales during the year, 1100, or 69·1 per cent., were natives of Ulster, and of the 411 who went to Scotland no less than 298, or 72·5 per cent., were also from Ulster.

April 16th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Radiotherapy in Keloid.

THOUGH not always dangerous, cicatrices of keloid are nevertheless very objectionable, especially when they disfigure the face. M. Belot on March 12th made an interesting communication to the Société de Radiologie Médicale, in which he showed that radiotherapy is the method of choice in such disfiguring and rebellious lesions. The treatment is often of long duration. The excellence of the result depends on the extent and thickness of the keloid, as well as on the character of the scar in which it has developed. From 30 personal observations M. Belot insists on the necessity of judiciously stopping the radiotherapy when it has effected all it is capable of, so as not to endanger the final result. In certain thick and widely spread cases surgical removal, followed immediately by radiotherapy, may be practised. In many cases so treated there is no relapse and cure is rapid.

The Use of New Therapeutic Serums.

The use of new therapeutic serums has already led to an action against a medical man. The case was as to the right of a medical man to use new therapeutic serums for purposes of research without exposing himself to prosecution under the law which subjects the manufacture and sale of serums to a previously obtained authorisation to be given only after investigation and analysis and with the sanction of the Academy of Medicine. The object of this law was to circumvent quackery and to prevent the dangers that might arise from the use of fantastic products or such as are prepared without adequate scientific safeguards. The strict enforcement of the law, however, is limiting scientific progress and paralysing research. A doctor of medicine having been prosecuted under these circumstances in the Correctional Court and acquitted, then condemned by the Court of Cassation and subsequently in the Rouen courts, the medical syndicates are much concerned over the defects that the discussions disclosed in the text of the law, and a monster protest has been organised. In consequence of the report of M. Netter at the Academy of Medicine on April 2nd, the Academy supported the proposition to insert in the law of April 25th, 1895, the following clause: "Exemption is made in the case of a medical man who, in view of his experience and on his own personal responsibility, makes use of therapeutic serums. But he must obtain a permit to introduce these products into his ordinary practice."

Municipal Ambulances.

On the motion of M. Lajarrige the Paris municipal council has referred for consideration by the Fifth Commission a proposal to augment the *personnel* of the municipal ambulances by the addition of 12 new nursing attendants, so that one may accompany each ambulance, and also of nine auxiliary drivers for the transport of patients to hospital at night or in cases of contagious disease.

The Reduction of Dislocations of the Shoulder by Gentle Methods.

Dr. Paul Gallois on April 9th described at the Academy of Medicine a method of reducing anterior dislocations of the shoulder, which is of remarkable simplicity. In the ordinary procedure traction is made on the dislocated bone until the contraction of the muscles is overcome by force or fatigue. In his procedure, which is a modification of the method of Latour and Kocher, no traction is made, and consequently there is no struggling with muscular contraction. The dislocated bone is made to act like the arm of a lever. The fulcrum of the lever is furnished by the capsule itself. It is, however, necessary that it should not have been completely torn. Movement is effected by the elbow. The head of the humerus having been brought forward and inwards by dislocation, to restore it to its place it is necessary for it to be carried backward and outwards; and since the elbow is acted on like the arm of a lever it is necessary to subject it to a movement inverse to that which one wishes to produce on the head of the humerus. The elbow, therefore, must be brought forward and carried inwards in front of the epigastrium. These movements should be effected slowly and with extreme gentleness, so as not to cause pain to the injured person and to prevent contraction of the muscles. When once the elbow is placed in the proper position one has only to wait, and the reduction will take place of itself. Two or three minutes' waiting suffices. Dr. Gallois has had not a single failure, and only exceptionally has he had to repeat the manœuvre. Since it must be practised with the utmost gentleness, fracture of the bone or rupture of the ligaments, which have been the reproach of the methods involving force, and particularly of that of Kocher, need not be feared. The operator must, in short, keep constantly in mind the fact that since the elbow is being used as a lever the force there applied is multiplied tenfold at the shoulder. For instance, a pressure of 2 kilogrammes at the elbow exerts a force of 20 kilogrammes at the shoulder, which would be sufficient to break the bone or the ligaments. This procedure is simple, since it requires neither assistant nor apparatus, is not painful, is sufficiently rapid, and the reduction is effected with surprising facility.

Physiotherapy.

The opening of the Fourth Congress of Physiotherapy took place on April 9th in the great amphitheatre of the Faculty of Medicine of Paris under the presidency of Professor Arsonval, supported by M. Bergonié, President of the Congress, M. Laquerrière (Secretary-General), M. Delherm, and a large number of foreign delegates, among whom were Professor Libette and Professor Hœurard, of Brussels; Dr. Howard and Dr. F. H. Humphris, of London; Dr.

Waylanoz, of Lausanne; and Dr. de Munter and Dr. Mœris, of Ghent. After an address by Professor Arsonval the session was given up to the study of the treatment of exophthalmic goitre by physical measures. The afternoon session was devoted to the study of chronic rheumatism. M. Haret recommended the use of radio-active waters for rheumatism, and for gout inhalations of radium emanation. M. Miramond de Laroquette spoke of the beneficial effects of heat and light. Various other communications were made. On the following day, in the morning, an interesting discussion on club-foot took place. Dr. Callot de Berek extolled the superiority of the bloodless method. M. Ménard, M. Landoz, M. Stapfer, and M. Badin discussed scoliosis and malformations of the skeleton in childhood. The Congress expressed the desire that an orthopædic medical inspection should be made in French schools. Finally, the treatment of cancer by physical methods was discussed. Dr. Doyen described his method of curing cancer by thermal electro-coagulation in cancer of the skin, the lip, the tongue, the tonsil, pharynx, and larynx, the cervix uteri, and the rectum. Then M. Keating-Hart communicated the later results of fulguration and described a new treatment of inoperable cancer—thermo-radiotherapy. The third day was devoted to the study of various forms of physical treatment of obesity. Dr. Heckel and Dr. Laquerrière gave a lecture on the treatment of obesity by electrical gymnastics. M. Amblard described the good effects of light therapy or light baths. Dr. Marcel Labbé and Dr. Vitry laid down the regulations of a severe dietetic regimen which will overcome the most rebellious cases.

April 15th.

ITALY.

(FROM OUR OWN CORRESPONDENT.)

Research, Biological and Clinical, at the Seat of War.

"Dragging its slow length along" to the tune of £80,000 a day the Italian "conquest" of Tripolitania is now within measurable distance of the end, accelerated, it is hoped, by an energetic advance *en masse* before the great heat suspends further operations inland. Italy from the beginning—now six months ago—has taken the war in grim earnest, and has already devised a "piano regolatore" for the laying out of her new possessions and for the development of the same under every aspect of twentieth century civilisation. Studies, meteorological and climatological, are already taxing the energies of her experts in those departments, and these, followed up by the required innovations in general hygiene and local sanitation, may yet endow Northern Europe with another health resort, another "Riviera" not less attractive than those of the French or Ligurian littoral. Six months' clinical experience among the *personnel* of the fighting force has already defined the more formidable maladies endemic in the region, and these are, in the day now passing, the subject of close and active investigation by a special commission composed of two civil and two military physicians, headed by the Commendatore Dr. Umberto Gabbi, who holds the chair of clinical medicine in the University of Messina. Professor Gabbi is known for his excellent work in the pathology and etiology of tropical diseases, and the experts now employed in Tripoli under his direction have made a start as full of promise as it is fraught with interest.

The Climate of Tripoli and Bengazi.

Dr. Carlo Errera, professor of geography in the University of Pisa, furnishes a preliminary sketch of the climatic conditions of the above centres, based on findings obtained by the Ottoman Government for the last 16 years. Tripoli, he says, has a temperature about equal to that of Southern Italy. Its maximum is reached at 43° C., while at Foggia, in Apulia the maximum has sometimes exceeded that degree—nay, at Palermo it has even been as high as 46° C. Taking the mean temperatures of the hot months (from June to September) they were found to be the same at Tripoli as at Foggia, on the Italian mainland, and at Palermo, Syracuse, and Catania in Sicily. In the winter months the differences are a little more perceptible, and are certainly not to the disadvantage of Tripoli, where the temperature seldom or never falls below 7° or 8° above zero, while the Sicilian and still more the southern Italian towns in midwinter have registered one or more degrees below zero. On the whole, the climate of Tripoli is as mild as that of the favourite resorts of Sicily, with this one drawback, that the great heat lasts longer than in that island, for often harbingered by days of summer-like warmth in March and April the heat gets intenser in May and does not abate till October, which in Tripoli is really a summer month. The cool nights, however, and the sea breeze from the north are an alleviating influence even in the dog days. As to Bengazi, the heat in winter and summer is generally higher, but only by a degree or two, and the difference between it and Tripoli is mainly principally by the greater drought at Bengazi, where for sometimes eight months in succession (from March to October inclusive) there scarcely falls a drop of water, while the winter rains are less frequent and less heavy. There is this to be said, however, that in the summer months the atmosphere is charged with moisture, more even at Bengazi than at Tripoli, so that with the lowering of the nocturnal temperature the vapour condenses in a refreshing dew. The winds, the so-called *ghibli*, the equivalent of the Egyptian khamseen or the simoon of the Sahara, at their hottest, are like a furnace-blast, and at their highest are loaded with a suffocating sand; but they carry no pernicious germs. Nay, according to Dr. Errera's authorities, they dry and purify the air and are, *pro tanto*, a hygienic "asset." Further and more precise findings as to the climate of the region, so soon to become Italian, will be available when, in addition to the meteorological stations at Tripoli and Bengazi, three more will have been established at Homs, Derna, and Jobruc. By this means our knowledge will be enhanced, supplementing that which we already owe to the honoured names of Professor Pietro Martinuzzi, director of the Technical School of Tripoli, and of Dr. Filippo Eredia, of the Central Office of Meteorology and Geodynamics.

April 10th.

BUDAPEST.

(FROM OUR OWN CORRESPONDENT.)

The Use of Finger-prints as Signatures to Documents.

IN Hungary about 15 per cent. of the population are illiterate, and in signing documents have up to the present time simply made with a pen a mark or cross × attested by the signature of one witness. However, it often occurred that insurance agents witnessed such signatory marks which they had themselves made, and conversely illiterate persons have often denied the authenticity of signatory marks alleged to be theirs, particularly after one or two years, when they might have forgotten the incident. To meet these difficulties a young physician of Marmarossziget has addressed a communication to the Minister of Justice, suggesting that signatory marks might be advantageously replaced by finger-prints. The idea was favourably received, and a committee has been appointed to consider it.

The Prophylaxis of Tuberculosis among the Agricultural and Village Population.

Dr. Alexander Korányi, professor of clinical medicine in the University of Budapest, recently delivered an address on the above subject at the Congress of Hungarian Specialists in Tuberculosis. He said that from a prophylactic point of view—with special regard to the agricultural classes—the sanatoriums were not satisfactory. A patient who was severely ill—whether rich or poor—had no proper place in a sanatorium and would never recover his health there. He also occupied the place of a patient for whom sanatorium treatment might be very useful—namely, a case in the initial stage. A poor person, even in the initial stage, derived very little benefit from sanatorium treatment. If he improved to some extent after several months' treatment in a sanatorium his condition soon deteriorated when he returned to his insanitary home. Dr. Korányi said that he was not opposed to sanatoriums as such, but he maintained that only patients in the initial stage, and those who could afford to live under favourable conditions after the sanatorium treatment, should avail themselves of these institutions. From a prophylactic point of view he regarded the establishing of special tuberculosis pavilions in the general hospitals, and the creation of tuberculosis dispensaries (of which there are about 25 in

Hungary) as of the first importance. Such institutions would, however, be of little or no benefit to villagers, who would refuse to become inmates of a hospital for a considerable period. They had not the patience necessary for this purpose, and dispensaries could not be established in villages. Continuing his address, Dr. Korányi said that a Danish scientist, as the result of observations made on cows for several years, found that half of them were tuberculous. This was very important, not only in connexion with the health of the population but also in connexion with national prosperity. The tuberculosis in the cows was evidently perpetuated from generation to generation, the calves being infected by their mothers which gave them suck. The Danish scientist in order to prevent the further spread of tuberculosis among his animals had separated the infected ones from the non-infected by means of the tuberculin reaction, and the calves of the infected cows were fed either on sterilised milk or suckled by healthy cows. This experiment resulted in a decrease of the number of infected cows from 70 per cent. to 30 per cent. In this way it was possible to check the spread of tuberculosis in cows with absolute certainty. From this fact Dr. Korányi drew the inference that the unhealthiness of village dwellings was aggravated by the practice of whole families living in one room. A tuberculous and expectorating member of such a family endangered those living with him under the same roof. Children were particularly predisposed to tuberculosis. According to the latest statistics in Hungary 10,000 children died yearly from tuberculosis, and many children who were carriers of Koch's bacillus became ill when grown up and died from tuberculosis. This being so, it was reasonable to separate children from parents who were suffering from manifest tuberculosis with expectoration as long as the children's health was in danger. In order that this might be made possible in the circumstances prevailing in villages, Dr. Korányi said that one or two villages might maintain one house for this purpose. This house would only require that its windows should be wider than the usual ones and that they should be kept scrupulously clean. Here the children might be accommodated until the danger had disappeared from their homes. He did not propose to separate a child from his parents entirely; the parents might see him from time to time, but only out of doors. Dr. Korányi added that he had been successful in persuading several large landowners to build on their estates such special houses for children. He concluded his address with the assertion that all the aristocracy and the clergy (who own millions of acres of land in Hungary) would in time follow the example of those above mentioned, and then tuberculosis would not commit such ravages in Hungary as it did at present.

Policlinic in a Country Town.

Nagyvárad, a flourishing industrial centre with 66,800 inhabitants, will be the first town in this country to establish a policlinic for the poorer classes. The policlinic will be open only for out-patients, and will be equipped with all modern requirements. The medical attendance will be given by a specialist in clinical medicine, a neurologist, an aural surgeon, a dermatologist, an X ray expert, and a bacteriologist. The equipment of the policlinic will cost about £3000, and the medical staff will receive salaries of about £100 a year for attending one hour daily except Sundays. The policlinic will be maintained by the town, and will cost about £2000 yearly. The idea of the policlinic has been brought up by Dr. Menyhért Groez, director of the local tuberculosis dispensary, who found that the medical treatment of the poorer classes in the town, as hitherto conducted, was not up to the level of the times. Nominally the poor people have been attended by the three district medical officers, who, being general practitioners, could not afford adequate assistance in cases where only a specialist could help. Thanks to the Western education of the mayor, the town council has heartily welcomed the erection of the policlinic, and the necessary amount to rent premises and to equip the institution has been voted unanimously.

April 15th.

DONATIONS AND BEQUESTS.—The late Mr. R. Davey, of Falmouth, has bequeathed £500 each to the Bristol Royal Infirmary, the Bristol General Hospital, and the Royal Hospital for Sick Women and Children, Bristol.

UNITED STATES OF AMERICA.

(FROM OUR OWN CORRESPONDENTS.)

Utilisation of Hospitals for Education.

Professor William H. Welch, in his address at the Forty-third Anniversary Celebration of the Presbyterian Hospital, New York, pointed out that in the last 60 years the death-rate had been reduced from 35 per 1000 to 15, the reduction being due almost solely to our growing control of infectious diseases. He deplored the fact that advantage was not taken of the enormous clinical material in New York furnished by the numerous and admirably conducted hospitals, and drew attention to the manner in which Germany, France, and even Great Britain would utilise such material. Bright, Hodgkin, and Addison made their studies from just such ample supply of cases. Only Johns Hopkins Hospital in Baltimore made a real attempt to avail itself of all the interesting and valuable cases that were brought to it. Speaking of the recent alliance between the Presbyterian Hospital and the College of Physicians and Surgeons, or medical department of Columbia University, Professor Welch made a special plea to wealthy laymen for support of the combined institutions in their triple capacity as humanitarian, philanthropic, and educational, and believed that there was at last an opportunity to create a hospital of the kind he had sketched as ideal.

A Suggested American Order of Merit.

Professor J. George Adami, of McGill University, Montreal, in the *New York Medical Journal*, writes of the ingratitude and neglect to which such men as Reed and Carroll were subjected in the United States after their epoch-marking studies of malaria and yellow fever, even the newspapers paying but slight attention to their achievements, and suggests that an Order of Merit might be instituted by the Central Government as one form of recognition. The suggestion has been respectfully received, even by the newspapers reproached by Professor Adami.

The Sale of Milk in New York State.

A Bill was recently passed through the New York State Legislature which, it is feared, will go far to nullify the efforts of the past few years to ensure a pure milk-supply for the State. It will be almost impossible under it to convict a dealer who handles impure milk, and if the dealers are relieved of legal responsibility contaminated milk will be surely sold. In the new law there is a loophole by which they may escape prosecution. The Governor of the State is being urged, especially by the medical authorities, to veto the Bill, otherwise the activity of the New York City Health Department in establishing infants' milk stations, of which there are now 24 in Manhattan, 2 in the Bronx, 22 in Brooklyn, and 1 each in the boroughs of Queens and Richmond, will be rendered unavailing.

Insane Aliens.

According to the report of the New York State Commission in Lunacy, of 31,432 insane patients in the 14 State hospitals on Feb. 10th no fewer than 13,163 (41·9 per cent.) were aliens. In the two State hospitals for the criminal insane out of 1230 patients nearly 44·4 per cent. were aliens. The prevalence of insanity, therefore, among immigrants to the United States is much greater than among the native-born population. The State Commission in Lunacy has petitioned the Governor for an investigation.

A Further Decrease in New York's Death-rate.

The death-rate for the first 12 weeks in 1912 was 15·66, that for the corresponding period of 1911 being 16·81. For the year 1911 it was 15·20, a decrease on 1910, which was 15·98.

The Prevention of Blindness.

The report of the committee on the prevention of blindness of the New York Association for the Blind points out that there are in the various schools for the blind throughout the country 2018 blind children, of whom 521, or 25 per cent., in the opinion of the committee, are blind because of the neglect of simple preventive measures. According to the committee, inspection of the free dispensaries proves that the law requiring a report of redness or soreness of the eyes

occurring within two weeks of birth is disregarded in New York. In Boston, on the other hand, a little energy in following up the law caused an increase in the monthly report of ophthalmia neonatorum in the course of 18 months, from 10 to 160. The committee believes that the sale of wood alcohol in sophisticated whisky in the poorer quarters of the city is responsible for many cases of blindness in the adult. The public schools now very generally test the vision of backward children by means of the Snellen cards, but this is done by lay teachers, and a report of conditions found to the parents may or may not produce results.

Ophthalmia Neonatorum in Chicago.

On March 4th the Chicago Council passed an important ordinance under which every physician and midwife must report to the health department within 24 hours the occurrence of every case of sore eyes developing within seven days after birth under penalty of a fine of from $5.00 to $25.00. It is hoped soon to supply the nitrate of silver drops for use in all cases in which they cannot be otherwise provided.

Characteristics of a Cancer Serum.

Dr. William N. Berkeley and Dr. S. B. Beebe, in a preliminary report of their studies of cancer at the Rockefeller Institute, believe it to be axiomatic that a cancer serum must be soluble in the blood, transmissible by the blood and lymph currents to all parts of the body, and possessed of a selective affinity for the cells of the tumour to be destroyed. Such a remedy may conceivably be of chemical nature existing in the outside world and by happy accident discovered to have the desired properties, as shadowed forth by Wassermann's eosin-selenium compound, or it may prove to be a physiological antibody developed in an alien species by successive injections of a cancer extract. The experiments of these investigators have been made exclusively with human neoplasms. They have made injections in 16 cases of malignant disease in all stages of advancement, and only five so far have terminated fatally in the nine months of experiment.

Infant Death-rate in Factory Towns.

A well-known sociologist, Mr. Edward W. Townsend, representative from New Jersey, in a speech in the National House of Representatives on March 29th, stated that in Lawrence, Mass., a centre of the textile industries, of every 100 deaths 47 were of children under 5, 35 of these being under 1 year of age, as against 27 and 19 respectively for the entire United States. High figures were also reported for Worcester, Mass., while in Fall River, Mass., a favourably situated manufacturing town, with no towering tenements and no congested areas, out of every 100 deaths 50 were of children under 5, 39 of these being under 1 year of age. Cambridge, Mass., which is not an industrial town, gave a percentage of 30 and 22 respectively. In New York there has been a considerable decrease in the infant mortality rate.

The Church and Eugenics.

The Dean of the Episcopal Cathedral of Chicago has announced that henceforward no couple will be married by the clergy of that church who cannot produce certificates of freedom from organic or contagious disease. The newspapers generally commend this step. A few hold that it is the State that should exact a certificate of health before issuing the marriage licence.

Warren Triennial Prize.

The subject for the Warren triennial prize of the Massachusetts General Hospital, founded by the late Dr. J. Mason Warren in memory of his father, is for the year 1913 some special subject in physiology, surgery, or pathology. The dissertation must be in the English, French, or German language, typewritten, and suitably bound. Previously published work will not be considered in competition. The name of the writer must be enclosed in a sealed envelope, on which must be written a motto corresponding with one on the accompanying dissertation. The amount of the prize for the year 1913 will be $500. In case no dissertation is considered sufficiently meritorious no award will be made. Dissertations will be received until April 14th, 1913. A high value will be placed on original work.

April 8th.

NOTES FROM INDIA.

(FROM OUR OWN CORRESPONDENTS.)

Medical Research in India.

AT the meeting of the Imperial Legislative Council in Calcutta in March, the Hon. Surgeon-General Sir C. P. Lukis, K.C.S.I., Director-General of the Indian Medical Service, in an interesting speech reviewed the medical research work that is being carried out in India. He said:—Sir Harcourt Butler, in his presidential address at the meeting of the first All-India Sanitary Conference, aptly remarked that the basis of all sanitary achievements in India must be a knowledge of the people and the conditions under which they live. This remark, it must be remembered, is true not only as regards their habits and customs but also as regards their surroundings. In European countries the situation may be summed up by saying that the three essentials are pure food, pure air, and pure water; but in the tropics, as has been pointed out by Sir Patrick Manson, a large proportion of the so-called tropical diseases are conveyed from one person to another by means of various biting insects. For this reason we cannot rely merely upon ordinary sanitary measures, such as schemes for drainage, conservancy, and water-supply. It is essential that we should study the life-histories of the various insects, with a view to determining which of them are actual carriers of disease, and to devising means for protecting human beings from their attacks. This work is now being quietly and steadily carried out, both in our various research institutes and in the field under the auspices of the Plague Commission and the Indian Research Fund; and in view of its importance I will lay before the Council, as briefly as possible, a statement of what we have done in the past and what we hope to accomplish in the future. The five diseases with which I shall deal, all of which we know to be conveyed from man to man by biting insects, are: malaria, yellow fever, plague, sleeping sickness, and kala-azar.

Malaria.—Malaria is conveyed from man to man by a certain species of the common dappled-winged mosquito, but any attempt completely to exterminate the mosquito in this huge country is predoomed to failure, and therefore it was considered advisable, before recommending to Government expensive schemes of doubtful utility, to make careful researches with a view to ascertain what are the dangerous species of mosquitoes from the point of view of malaria, what are their habits, and where are their breeding places. Thanks to the labours of research workers all over the country we are now in possession of a vast amount of valuable information which leads us to believe that, whereas wholesale destruction of mosquitoes without any definite plan of campaign would be mere waste of time and money as far as malaria is concerned, on the other hand systematic anti-mosquito measures in carefully selected localities are likely to be crowned with success. Take, for instance, the case of Bombay. The researches of Lister, McKendrick, and Bentley have shown that malaria prevalent in that city does not arise from the swamps that surround it, but that infection is carried by a certain species of mosquito, of extremely domestic habits, which lives and breeds in the wells situated in the courtyards of private houses. Recently, too, Major Christophers has shown that the malaria in the Andamans is largely due to a species of mosquito which breeds in the brackish pools on the seashore, and that the mosquitoes inhabiting the rice fields and the surrounding jungle are perfectly harmless. It is hardly necessary to point out how much this has simplified the problem before us. While these and other investigations have been in progress, Major Christophers has been training at Amritsar a body of skilled workers who have been taught how to distinguish the various species of mosquitoes, how to find out their haunts, and how to destroy them. In order to detect the presence of malarial parasites, at the same time we have been carrying out careful malarial surveys of certain selected towns, so that we are now fully prepared to start a definite antimosquito campaign with reasonable prospects of success. On the other hand, if we had commenced our proceedings by an indiscriminate slaughter of possible innocent mosquitoes, we should have

wasted large sums of money and probably have brought antimosquito measures into undeserved disrepute.

Yellow fever.—Yellow fever, again, is a disease which is conveyed from man to man by another species of mosquito, the stegomyia, which is the common striped, or tiger, mosquito with which all are familiar. Major James has been sent to Panama to devise measures for keeping the disease out of the country; but it is also necessary that we should take measures for stamping it out if ever it obtains foothold. With this object we propose making a careful stegomyia survey in all the principal ports with a view to ascertain the breeding places of these mosquitoes, and, if possible, to destroy them before the disease reaches the country. If we can only free our ports from these insects there is no fear that any cases accidentally introduced will act as centres of infection or that the disease will spread.

Plague.—We now come to plague. Prevention in this is very largely a question of domestic hygiene, as distinguished from general sanitation. Recent observations all tend to show that, so far as bubonic plague is concerned, conveyance by the rat-flea must now be regarded as an accepted fact and not merely as a theory. There are many localities, especially in Madras, Eastern Bengal and Assam, and the United Provinces, which hitherto have not been attacked by plague. During the past year careful inquiries have been made by officers of the Plague Commission into the cause of this local immunity and it has been clearly proved that wherever this immunity is found one of two conditions exists—(1) the climatic conditions are unfavourable for the multiplication of fleas; or (2) the habits of the people conduce to scarcity of rats in the houses. This is a strong confirmation, if any confirmation was needed, of the truth of the rat-flea theory. I must also mention two other important observations by officers of the Plague Commission. When plague invades a town or village it is usually conveyed by fleas carried in the clothes or bedding of persons coming from infected areas, or else the fleas are brought in with bags of grain which have been in contact with infected rats. Captain Cunningham's experiments at Parel have shown that fleas in clothes or bedding can be destroyed without any expensive process of disinfection. All that is necessary is to expose the articles to the action of bright sunlight for several hours. This process is obviously unsuitable for bags of grain, but experiments are now in progress at Parel which will, I hope, solve the problem of how to kill the fleas without damaging the contents of the bags.

Sleeping sickness.—Sleeping sickness is spread in Africa by the tsetse fly, and up to the present it has not extended to India; indeed, many persons hold that it can never do so, seeing that tsetse flies do not exist in this country. Recent events, however, in Rhodesia lead one to think that the tsetse fly may not be the only carrier. Moreover, in these days of rapid communication there is no certainty that it may not ultimately reach our shores, and once it reaches them there is no reason why it should not spread and multiply even more rapidly than rabbits have multiplied in Australia. For this reason the study of medical entomology is included in the programme of work to be done under the auspices of the Indian Research Fund, and the biting flies of India will receive special attention.

Kala-azar.—The last disease to mention is kala-azar, or, as it is sometimes called, dum-dum fever. This is a chronic and usually fatal disease, associated with great enlargement of the spleen, which was formerly supposed to be malarial in its origin. In 1904, however, it was shown by Leishman and Donovan to be due to a parasite which is totally different in its nature from that which causes malarial fever, and there is strong evidence that the anopheles mosquito is not the carrier in this case. There are several points in connexion with this parasite which require further investigation, and these are now being taken up by the officers working under the Research Fund in India. There are two varieties of this parasite. One of them causes the fatal disease known as "kala-azar," whilst the other gives rise merely to a local sore, which is known by various names in different parts of the country, such as "Delhi boils," "Sind sores," &c., and there are reasons for believing that the two parasites are mutually antagonistic. This is a point on which we seek to obtain accurate and scientific evidence, for if the antagonism is proved, then it may be possible to protect patients against kala-azar by inoculating them with the milder disease, just as we vaccinate people to protect them from small-pox. The next question is, What insects act as carriers in this disease? Captain Patton, as the result of his observations in Cambay and Madras, holds that the common bed-bug is the carrier of oriental sore and kala-azar, and he has advanced strong evidence in favour of his views. Other observers, however, incriminate the house-fly, the tiger mosquito, and sand flies, so that further observation is clearly necessary. The observations have been rendered even more necessary by the recent discovery that there is a third variety of the parasite, occurring on the shores of the Mediterranean, and affecting chiefly children, giving rise to what is known as "infantile kala-azar." This disease has been shown to exist also in dogs, and it appears probable that it may be conveyed from dogs to human beings by means of the dog fly. So far it has been found impossible to infect dogs in India with the Indian variety of the parasite, nor has it been proved to occur in them naturally. It is obvious, however, that a more extensive examination of dogs in kala-azar districts in India is clearly indicated, and this examination will now be undertaken.

Surgeon-General Lukis concluded by claiming that money allotted for research purposes is money well spent and also that the officers serving under him are making steady progress towards the elucidation of the difficult problems with which they are confronted.

March 20th.

Obituary.

SIR JAMES JENKINS, K.C.B., M.D. GLASG., M.R.C.S. ENG.,

INSPECTOR-GENERAL, ROYAL NAVY (RETIRED); HONORARY SURGEON TO THE KING.

Sir James Jenkins, who died at his residence, Nevinston, Plymouth, on April 5th, in his ninety-fourth year, was born in Scotland. He graduated in 1839 as M.D. at the University of Glasgow, and became a Member of the Royal College of Surgeons of England in 1845. In 1841 he entered the Royal Navy as assistant surgeon, became surgeon in 1854, staff-surgeon in 1863, and in 1872 deputy-inspector of hospitals. In 1878 he retired from the service with the rank of inspector-general of hospitals. He served as surgeon to the Naval Brigade in the Crimea, 1854–55, and operated with the military force until Sebastopol was captured. He rendered valuable assistance during the outbreak of cholera which attacked the allied troops in 1854. In 1855 he was at the capture of Kherson. He was awarded the medal with a clasp for Sebastopol, the Turkish medal, and the Legion of Honour. Sir James Jenkins also served during the China war of 1857–61, being staff-surgeon to the hospital ships *Belleisle* and *Simoom*. At the close of the war he received the medal and two clasps. He was senior medical officer of the Plymouth Division of the Royal Marine Light Infantry from 1861 to 1869, and in 1867 he received the C.B. From 1869 to 1872 he was senior medical officer to the Royal Marine Artillery at Eastney. From 1872 until 1875 he was deputy inspector-general of the Naval Hospital, Bermuda, and from 1875 to 1878 of the Royal Naval Hospital, Plymouth. In 1882 he was appointed honorary surgeon to Queen Victoria, and in 1887 was created K.C.B. He was honorary surgeon successively to King Edward VII. and King George V. On his retirement Sir James Jenkins resided at Nevinston, Mannamead, Plymouth, where he lived a very quiet life and was greatly interested in gardening. He was very popular in Plymouth, and until quite recently was a familiar figure in the streets there.

The deceased was a widower, his wife, the eldest daughter of the late Admiral Lucraft, having died in 1862, after only a few months of wedded life.

DONALD CAMPBELL, M.D. GLASG.

Dr. Donald Campbell died at Calne, Wilts, on April 14th. He was educated at the University of Glasgow, where he graduated with the degree of M.D. in 1864. In 1867 he went to Calne, where he was in practice until his death from pneumonia. He was medical officer to the Calne workhouse, and medical officer of health to the urban and district

councils. Dr. Campbell was not only a hardworking and painstaking practitioner, but he possessed original ideas, and the courage of them, which enabled him quickly to see the advantages and disadvantages of any new scheme and to state his opinion upon it. It was due to his initiative that Calne is supplied with plentiful and good water, and possesses an efficient scheme of sanitation in connexion with a sewage farm, with the result that typhoid fever from being endemic has been practically absent. It was due to his advice, we believe, that Calne was among the first of the smaller towns to possess an isolation hospital.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. H. N. Winton, formerly professor of medicine in the University of California, San Francisco.—Dr. Melvin Lamb, professor of physiology in Howard University, Washington.—Dr. Alfonso Calabrese, *privat-docent* of medicine in the University of Naples.—Dr. L. Magnus Möller, professor of syphilography in the Stockholm Medical School.—Dr. Richard Frommel, formerly professor of midwifery and gynæcology in the University of Erlangen.

THE NATIONAL INSURANCE ACT.

SCOTTISH MEDICAL INSURANCE COUNCIL.

THE first meeting of the Scottish Medical Insurance Council was held in the hall of the Royal College of Surgeons, Edinburgh, on Friday and Saturday last. This meeting was the outcome of a conference which was held on Jan. 20th last, composed of representatives of the Medical Faculties of the Scottish Universities, of the Councils of the Royal College of Physicians and the Royal College of Surgeons of Edinburgh, and of the members of the Scottish Committee of the British Medical Association, at which it was decided to form a Scottish Medical Insurance Council. The object in forming the Council was to consolidate medical opinion and to act for the profession in the promotion and maintenance of its interests as these will be affected by the National Insurance Act. To this, the first meeting of the Scottish Medical Insurance Council, there were appointed by the medical practitioners in Scotland 58 direct representatives from the insurance areas, two representatives from the Medical Faculty of each of the four Scottish Universities, five representatives from each of the Scottish medical corporations, while the Scottish Committee of the British Medical Association was represented by all its members, numbering 16.

The election of the representatives from the insurance areas was effected through the organisation of the British Medical Association. Of the 58 direct representatives 54 were present, including representatives from Caithness to Wigtownshire. The meeting elected Dr. William Russell, Edinburgh, one of the representatives of the Royal College of Physicians of Edinburgh, chairman, and Dr. Robert C. Buist, Dundee, one of the members of the Scottish Committee of the British Medical Association, deputy chairman, of the Council. The meeting decided that there should be increased representation from the larger towns and insurance areas; also that two medical women should be invited to join the Council. An Executive Committee, consisting of representatives proportionally appointed from all the bodies interested, was elected, and it was given powers to appoint subcommittees, which will deal with contract practice in the colliery and other insurance areas, &c.

After the technicalities involved in the constitution of the Council had been disposed of, the Council then proceeded to deal with the policy which the profession should adopt in connexion with the National Insurance Act. It was determined that the insurance areas should be regarded as units for the purpose of organisation, and that in each area provisional medical committees should be elected by the medical practitioners in the areas. Upon these committees was to fall the responsibility of organising the profession in their respective areas, the committee to report from time to time to the Executive Committee of the Scottish Medical Insurance Council, and not to enter into any dealings or relations with any of the authorities under the Insurance Act without receiving the sanction of the Executive Committee.

On Friday the Council sat from 3.30 P.M. to 11.30 P.M., with an interval of two hours for dinner. The Council resumed its sittings at 9.30 A.M. on Saturday morning, when the following motion by Dr. G. A. Berry, the President of the Royal College of Surgeons, Edinburgh, seconded by the President of the Royal Faculty of Physicians and Surgeons, Glasgow, was unanimously passed:—

> That this body, elected by the whole of the medical profession in Scotland, and representing all branches of the profession, desires to place on record on the occasion of its first meeting, its complete sympathy with the widespread dissatisfaction and regret that the profession should not have been adequately consulted at any stage with regard to the provisions of a measure introduced ostensibly in the interests of the public health.

The meeting affirmed its adherence to the six cardinal principles originally adopted by the medical profession and agreed that there be added thereto a seventh, viz.:—

> Disciplinary powers to be vested in some properly constituted medical body.

The Council resolved to inform the Scottish Commissioners at once of its constitution, and of its representative character, and to inform them of its strong disapproval of the action of the Scottish Commissioners in appointing medical members of the Advisory Committee without reference to the wishes of the profession. As the Council represents the profession in Scotland it was held that it should have the privilege of nominating six members on the Advisory Committee. It was further resolved that the Commissioners should be informed that any application for information as to statistics in regard to medical practice, which they may require, ought to be addressed to the Scottish Medical Insurance Council and not to individual members of the profession. The meeting further approved of the proposal that, in the event of the possibility of the seven cardinal principles, approved and adopted, not being incorporated in the regulations issued by the Commissioners, the executive of the Council should at once take steps to prepare a scheme for a public medical service, adapted to the circumstances of the various areas in Scotland, to be organised and carried on by the profession. The "sederunt" lasted till 2.30 P.M.

Communications in connexion with the Scottish Medical Insurance Council should be addressed to the acting secretary, 54, George-square, Edinburgh.

SHOREDITCH MEDICO-ETHICAL SOCIETY.

The first general meeting of this society was held at the Holborn Restaurant on April 12th, Dr. Major Greenwood being in the chair. The chairman reported that a meeting of the Executive Committee had been held since the formation of the society, and a set of rules drafted. The rules were unanimously adopted. Mr. J. H. Porter (honorary secretary) said that every practitioner residing in the area of the borough of Shoreditch had signified his or her intention of joining the society. Dr. F. J. Smith congratulated them on their success in enrolling all the local practitioners. If other boroughs would only do likewise, there would be little difficulty in dealing with the Insurance Act in the metropolitan area. The chairman said that a great deal of their success was due to the admirable manner in which Mr. Porter had canvassed the district. Very little could be done unless individual practitioners could be found to give their time and labour for the general interest. For his part he did not think the profession would accept the Act, and their organisation would be chiefly required to enforce reasonable terms on the Friendly Societies. Mr. H. A. Speed spoke of the advisability of demanding "payment of work done" rather than "capitation payment," and the chairman said that that would be an important point for discussion at future meetings.

LEWISHAM PROVISIONAL MEDICAL COMMITTEE.

A meeting of the subcommittee (for Blackheath and Lee) of the Lewisham Provisional Medical Committee was held on April 12th. A personal canvass was instituted to induce all medical practitioners resident in the district to sign the British Medical Association undertaking and contribute to the Insurance Defence Fund. It was also arranged to obtain signatures to the local guarantee adopted by the Lewisham Medical Committee: "Not to accept any work under the National Insurance Act or any other medical contract work

at lower terms than those sanctioned by the British Medical Association."

The honorary secretary reported that the following letter had been received from the National Health Insurance Commission in reply to a request for information as to the date of issue of the "Regulations for Medical Benefits," and the probable date of the formation of the District Insurance Committee for the borough of Lewisham:—

April 16th, 1912.

SIR,—With reference to your letter received on the 12th inst., I am directed by the National Health Insurance Commission (England) to state that the regulations for the administration of medical benefit are under consideration, and the date of their issue cannot at present be stated. With regard to the formation of the Insurance Committee for the metropolitan borough of Lewisham, I am to point out that under the proviso to Section 59 (4) the formation of District Committees will depend in the first instance on the scheme to be prepared by the Insurance Committee of the county, subject to the regulations to be made under that section. These regulations have not yet been issued, but intimation of them will be given in due course when issued.

I am, Sir, your obedient servant,

Hon. Secretary, Lewisham Medical Committee. L. S. BROCK.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS OF LONDON AND SURGEONS OF ENGLAND.—At the quarterly examination in Practical Pharmacy of the Examining Board in England held on April 11th the following gentlemen were approved:—

Lancelot White Barlow and Robert Eric Barnsley, St. Bartholomew's Hospital; Philip Norman Button, Middlesex Hospital; Maurice Hereward Cane, St. Bartholomew's Hospital; Henry George Richmond Canning, private study; William King Churchouse, Charing Cross Hospital; Eric Clarence Cline, Guy's Hospital; Eliezer Coplans, St. George's Hospital; David Hamilton Derry, St. Bartholomew's Hospital; Edward Garlick Fisher, Liverpool University; Ronald Hodson, St. Bartholomew's Hospital; Frank Cornwell Hunot, Guy's Hospital; Claude Stewart James Kearney and Guy Kinneir, St. Bartholomew's Hospital; Harold Bishop Logan, Bristol University; Percy East Lones, University College Hospital; William Ulic Desmond Longford, St. Bartholomew's Hospital; Owen David Baker Mawson, London Hospital; Louis Marie Jacques Menage, Leonard Milton, and Alan Vivian Moberly, Guy's Hospital; Richard Frith Quinton, London Hospital; John Magnus Redding, Charing Cross Hospital; Joseph Edward Rivera, Manchester University; Charles Meadows Ryley, Guy's Hospital; John Thomas Samuel, University College, Cardiff, and private study; Humfrey Newnham Sealy, London Hospital; Basil Lyndon Skeggs, St. Bartholomew's Hospital; Kenneth Vickerman Smith, Charing Cross Hospital; William James Dobson Smyth, Guy's Hospital; Douglas Leigh Spence, St. Bartholomew's Hospital; James Randolph William Stephens, Manchester University; William Allan Stewart and James Simpson Strachan, London Hospital; William Frank Thompson, St. Bartholomew's Hospital; Vernon Charles Whitby Vickers, St. Mary's Hospital; Walter Geoffrey Watson, St. George's Hospital; and Frederick Langton Webster, Manchester University.

UNIVERSITY OF LONDON.—At the Second Examination for Medical Degrees held recently the following candidates were successful:—

Part I., Organic and Applied Chemistry.—Arthur Wilfrid Adams, University of Bristol; David William Jabez Andrews, Middlesex Hospital; Mary Neville Andrews, London (Royal Free Hospital) School of Medicine for Women; Ivor Aubrey, University College, Cardiff; Donald Aucutt, King's College; Charles Hunter Donaldson Banks, St. Bartholomew's Hospital; Christopher Percival Barber, King's College and Charing Cross Hospital; Edgar Broughton Barnes, St. Bartholomew's Hospital; George Charles Berg, St. Thomas's Hospital; Christian Frederick Beyers, St. Bartholomew's Hospital; Eric Biddle, Guy's Hospital; Gilbert Blurton, University of Birmingham; Charles Vincent Boland, St. Bartholomew's Hospital; Maurice Charles Breese, King's College and Westminster Hospital; Charles Hugh Colclough Byrne, St. Thomas's Hospital; Frank Chadwick, Victoria University of Manchester; Hetty Ethelberta Claremont, London (Royal Free Hospital) School of Medicine for Women; William Maurice Crombie, St. Thomas's Hospital; Robert Malcolm Dannatt, St. Bartholomew's Hospital; Ernest Ivon Davies, University College, Cardiff; Thomas Anwyl Davies, St. Thomas's Hospital; John Ralph Dingley, University College; Geoffrey Barron Dowling, Guy's Hospital; Eric Hastings Eastwood, University of Liverpool; Cuthbert Wynford Ellison, University College; Hubert Henry Lacey Ellison, St. Bartholomew's Hospital; William Jones Evans, University College, Cardiff; Susan Alfreda Finch, London (Royal Free Hospital) School of Medicine for Women; Ronald Kelson Ford, London Hospital; Charlotte Iris Fox, London (Royal Free Hospital) School of Medicine for Women; Douglas Hugh Aird Galbraith, Guy's Hospital; Paul Currey Gibson, London Hospital; Olaf Gleeson, Middlesex Hospital and private study; Llewellyn Grey, University College, Cardiff; Alexander Fitzgerald Grattan Guinness, Guy's Hospital; Hilda Mary Halliday, London (Royal Free Hospital) School of Medicine for Women; Frank Keith Hayman, University of Bristol; George Edwin Heath, St. Bartholomew's Hospital; Valentine Robert Hirsch, Guy's Hospital; Mary Isabella Hounsfield, Newnham College and London (Royal Free Hospital) School of Medicine for Women; Edith Caroline Hudgell, London (Royal Free Hospital) School of Medicine for Women; Philip Hudson, University College; Henry Cecil Jennings, St. Thomas's Hospital; Rhys Bevan John, University College, Cardiff; James Gaymer Jones, Guy's Hospital; Percy Tudor Jones, University College, Cardiff; Frank Alexander Knott, Guy's Hospital and Imperial College, Royal College of Science; James Kyle and Herbert John Leviseur, Guy's Hospital; David John Adams Lewis, London Hospital; Kenneth Thomas Limbery, St. Thomas's Hospital; Annie Lloyd, London (Royal Free Hospital) School of Medicine for Women; Vernon Edmund Lloyd, Guy's Hospital; Walter Henry Lloyd, Middlesex Hospital; Hugh Montagu Cameron Macaulay, St. Bartholomew's Hospital; George Alex. Sheridan Madgwick, London Hospital; Peter George McEvedy, Guy's Hospital; John Edward George McGibbon, University of Liverpool; Ralph Godfrey Michelmore and Hickman W. Lancelot Molesworth, London Hospital; Ferdinand Molina, St. Thomas's Hospital; Allan Hawkins Morley, London Hospital; Duncan Collingwood Ogilvie, Middlesex Hospital; Hugh Roger Partridge, University of Leeds; Doris Mary Pearce, The University and Municipal Technical School, Birmingham, and private study; Enid Maud Pfeil, London (Royal Free Hospital) School of Medicine for Women; Griffith James Randell and David Rees, University College, Cardiff; David William Ryder Richardson, St. Paul's School; Arthur Eaton Richmond, St. Thomas's Hospital; Eveleen Blanche Gibson Rivington, London (Royal Free Hospital) School of Medicine for Women; John Elvin Rusby, University of Leeds; Trevor Cecil Russell, St. Mary's Hospital; Ephraim Sakoschansky, University College, Nottingham; Enid Eleanora Sanger-Davies, London (Royal Free Hospital) School of Medicine for Women; James Ernest Scanlan, St. Mary's Hospital; Thomas William Short, London Hospital; John Forest Smith, St. Thomas's Hospital; Michael Cecil Stark and Robert Gee Sterling, London Hospital; Aubrey Lennard Stokes, Guy's Hospital; Godfrey Trehane Symons, King's College; Glyde Philip Tatton and Hugh Watts Taylor, London Hospital; Donald Carmichael Thomas, St. Thomas's Hospital; James William Tudor Thomas and Rufus Clifford Thomas, University College, Cardiff; William Leslie Thomas, Middlesex Hospital; Ralph Reakes Thompson and Douglas James Valentine, London Hospital; Herbert Stewart Wacher and Morris John Theodore Wallis, Guy's Hospital; Hugh Wearne, Middlesex Hospital; Phillis Emily Webb, London (Royal Free Hospital) School of Medicine for Women; Philip Hewer Wells, St. Bartholomew's Hospital; Arthur Willatt, London Hospital; Alban Wilson, University College; and Wilfrid Conrad Stanley Wood, King's College and Birkbeck College.

Part II., Anatomy, Physiology, and Pharmacology.—Guido Carlo Giulio Baldini and Francis Gregory Lawson Barnes, St. Bartholomew's Hospital; Frank Montague Barnes, St. Thomas's Hospital; Thomas David Coilis Barry, University of Liverpool; Stanley Batchelor, London Hospital; William Roy Blore, Victoria University of Manchester; Frederick Hubert Bray, London Hospital; Isabel Florence Buckle, London (Royal Free Hospital) School of Medicine for Women; Harold Garrett Chaplin, St. Thomas's Hospital; Dorothy Chick, London (Royal Free Hospital) School of Medicine for Women; Ying-Jue Cieh, King's College; Lilian Annie Clark, London (Royal Free Hospital) School of Medicine for Women; William Edward Kyte Coles, University of Edinburgh; Herbert William Cooke, University of Bristol and University College; Percy Vernon Davies, University College, Cardiff; Alexander Decimus d'Avray, University College; John Alfred Wylde Ebden, King's College; George Dunluce Eccles, Guy's Hospital; Ahmed Fahmi El Hakim, London Hospital; Robert Ellis, University of Birmingham and St. Bartholomew's Hospital; Richard Feltrim Fagan and Hugh Alderson Fawcett, University College; Joseph Fielding, Victoria University of Manchester; Septimus Alexander Forbes, London Hospital; Humphrey Leonard George Foxell, University College; Samuel Lionel Green, St. Bartholomew's Hospital; David William Griffith, University College, Cardiff, and Middlesex Hospital; Herbert Stuart Griffith and Hugh Ernest Griffiths, St. Bartholomew's Hospital; Norah Hamill, London (Royal Free Hospital) School of Medicine for Women; Ranald Montagu Handfield-Jones, St. Mary's Hospital; Arthur Geoffrey Paterson Hardwick, London Hospital; Cyril Edward Harrison, Middlesex Hospital; Stanley Sextus Barrymore Harrison, Guy's Hospital; Jessie Eva Hart, London (Royal Free Hospital) School of Medicine for Women; Horace William Hay, University College; Alec George Holman, London Hospital; George Maudslay Jackson, University of Bristol; Hilda Grace Johnson and Mary Emmeline Joll, London (Royal Free Hospital) School of Medicine for Women; Samuel Walter Maslen Jones, Middlesex Hospital; William Morris Lansdale, Guy's Hospital; Hugh James McCurrich, University of Bristol; Helen Marion Macpherson Mackay, London (Royal Free Hospital) School of Medicine for Women; John Finlayson Mackenzie, Guy's Hospital; Showkiram Sahijram Malkani, University College; Vivian Mercer Métivier, St. Bartholomew's Hospital; Allan Noel Minns and James York Moore, Guy's Hospital; Henry Ray Parsloe, London Hospital; Margaret Russell Paterson and Innes Hope Pearse, London (Royal Free Hospital) School of Medicine for Women; Alan Cecil Perry, London Hospital; Emma Christine Pillman, London (Royal Free Hospital) School of Medicine for Women; Arthur Lisle Punch, Guy's Hospital; John Bromley Rawlins, St. Mary's Hospital; Frederick Tavinor Rees, University College, Cardiff; James Albert Robinson, St. Bartholomew's Hospital; Farid Henein Abdel Sayed, St. Mary's Hospital; Hilda Mary Scarborough, London (Royal Free Hospital) School of Medicine for Women; Maitland Scott and Philip Dennis Scott, Guy's Hospital; Gerald Davenant Shann, King's College and St. George's Hospital; Clive Justin Hicks Sharp, University College; Henry Richard Sheppard, St. Thomas's Hospital; Alfred George Simmins, Leslie Muir Smith, John Frank Herbert Stallman, John Stephenson, and Louis Bruce Stringer, Guy's Hospital; Douglas George Clutsam Tasker and William Edmund Taylor, University of Bristol; Joseph Bulmer Thackeray, London Hospital; Alfred Stewart Wakely, King's College; Ernest Haines Walker, St. Thomas's Hospital; Honoria Josephine Wallace and Katharine Ada Waring, London (Royal Free Hospital) School of Medicine for Women; and Samuel Wilson, Guy's Hospital.

N.B.—This list, published for the convenience of candidates, is issued subject to its approval by the Senate.

UNIVERSITY OF LIVERPOOL.—At the examination for the Diploma in Tropical Medicine held recently the following candidates were successful:—

J. R. Aeria, E. L. Anderson, J. Borle, J. T. Bowie, L. P. Brassey, D. Christie, H. de C. Dillon, M. R. Kochhar, V. W. T. McGusty, A. J. Milne, H. N. Pelly, B. Prasad, G. Prentice, F. Ross, A. J. H. Russell, M. W. Ruthven, and J. Sandilands.

UNIVERSITY OF GLASGOW.—The following have passed the First Professional Examination for the degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.) in the subjects indicated (B., botany; Z., zoology; P., physics; C., chemistry):—

William Dick Allan (Z., C.), John Alston (Z., C.), William Baird (Z.) Joseph Edward Bannen (Z., C.), William Barras (Z.), Robert Gloag Battersby (B., Z.), James Beveridge (B., P.), William Ernest Boyd (C.), James Prowse Broom (Z., C.), Archibald Campbell Brown (Z., C.), Henry Drummond Brown (Z., C.), John Alexander Buchanan (Z., C.), Stuart Ernest Armstrong Buckley (Z., C.), Duncan Cameron (Z., P.), Joseph Chalmers (Z., C.), David Clyde (Z., C.), Douglas Hamilton Coats (Z.), William Kerr Connell (Z.), Alexander Findlay Cook (Z., C.), Archibald Shankland Cook (Z.), Walter Gow Cook (P.), Alexander John Copeland (Z., C.), James Crerar (Z., C.), John Norman Cruickshank (Z., C.), John Williamson Dalglish (Z., C.), Andrew Davidson (Z.), George del Pino (B., P.), Michael Devers (Z., C.), John Dunbar (Z., C.), Samuel Norman Dykes (Z., C.), James Ewing (Z., C.), Basil William Henry Fergus (Z., C.), Thomas Finlay (C.), Thomas Fleming (Z., C.), Lewis Livingstone Fotheringham (Z., C.), Matthew Mair Frew (Z., C.), Thomas Ronald Fulton (Z., P.), Robert Kinnear Hay Gillespie (C.), John Gray Gilmour (C.), William Gordon (B., P.), Peter Fife Anchinachie Grant (Z.), Thomas Gray (Z., C.), David Heard (Z., C.), Samuel John Henderson (Z., C.), George Mundell Hetherington (B., P.), Arthur Robert Hill (Z., C.), Theodore Paton Hutchison (Z., P.), Oswald Johnston (Z.), Stewart Johnstone (Z., C.), Thomas Kemp (Z., P.), Arthur Kennedy (Z., C.), Peter Stewart Kinloch (B., P.), Robert Lindsay (Z., C.), Frederick Colquhoun Logan (Z., C.), Peter Young Lyle (C.), James Wallace Macfarlane (Z., C.), Joseph Patrick M'Greehin (Z., C.), Edward M'Guire (Z., C.), John MacInnes (P.), Douglas Bower M'Intosh (B., Z., P.), Keith Stuart Macky (Z., C.), Duncan M'Laren (B., P., C.), John Wilson Maclean (Z., C.), Peter Donald MacLean, M.A. (Z., C.), Alexander Fisher M'Millan (Z., C.), Donald Macphail M'Millan (B.), Frederick Robertson Martin (Z.), Alexander M'Callum Millar (Z.), William Watson Morrison (C.), Alexander Morton (Z., C.), John Frame Narie (Z.), Prem Nath (B., Z., P., C.), Thomas Fraser Noble (C.), James Orr (B., Z., P.), James Herbert Paul, M.A. (Z.), Andrew Christie Philps (C.), Thomas Poole (Z.), Thomas Joseph Quigley (Z., C.), John King Rennie (Z.), Francisco Ribeiro (B., Z.), Alexander Wilkie Ritchie (Z., P.), Robert Rodger (Z., C.), Frank Watt Sandeman (Z., C.), Angus M'Alpine Scott (Z., C.), Herbert Harold Spencer (Z., P.), James Steel (Z., C.), John Steele (Z., C.), Abraham Raphael Steinberg (Z., C.), Charles Hugh Stewart (Z.), Pat Adam Stewart (P., C.), William Mitchell Stewart (Z., C.), John Stirling (Z.), Henry Stuart (P., C.), George Carson Swanson (Z., C.), John Brunton Sweet (P.), Clement Bennet Templeton (Z.), John Lawrence Torley (C.), Herbert Watt Torrance (Z., C.), George Turnbull Walker (Z.), John Dalgliah Watson (Z.), Robert Smellie Weir (Z.), Kenneth John Talbot Wilson (Z., C.), John Thomas Wylie (Z.), and Robert Young (B, Z.).

Women.—Janetta Margaret Alexander (Z.), Christina Blair Buchanan (Z., C.), Maud Christine Cairney (Z., C.), Winnifred Jane Crawford (Z.), Jessie Crawford Gilchrist (Z., C.), Jean Lawrie Hamilton (Z.), May Constance Boughton Leigh (P.), Margaret Jane Thorburn Leitch (Z., C.), May Elizabeth MacIver (Z., C.), Mary Ann MacLennan MacLean (Z., C.), Alice Julia Marshall (B., Z., P., C.), Elizabeth Stewart Martin (Z.), Margaret Kay Mitchell (Z., C.), Mary Helen Routledge (Z., C.), Mary Scott (P., C.), Alison Edgar Wilson (Z., C.), and Marion Baillie Darling Wilson (Z., C.).

The following have passed the Second Professional Examination for the degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.) in the subjects indicated (A., anatomy; P., physiology; M., materia medica and therapeutics):—

John Anderson (A., P.), Robert Armstrong (P., M.), George Flett Barr (A., P., M.), Andrew Duffield Blakely (A., P.), Robert William Brander (A., P., M.), William Hunter Brown (A., P., M.), Maurice Smith Bryce (A., M.), Samuel Bryson (A., M.), John Buchanan (P.), James Alexander Chrystie (A., P.), Allan La Barte Clark (A.), Robert Clark, M.A. (A., P.), Andrew Climie (M.), James Paterson Crawford (A., P.), William Cullen (P.), Walter Thompson Currie (A., P.), Fritz Vivian Daeblitz (A., P.), Alexander Dick (P.), Joseph Dunbar (P.), Dugald Ferguson (A., M.), James Jackson Finlay (P.), George Fleming (A., P.), James Bryan Fotheringham (A.), Allan Dumbreck Fraser, M.A. (A., P., M.), George John Fraser (M.), Robert Frew, B.Sc. (A., P., M.), Alexander John Gibson, M.A. (A.), William Hamilton Gibson (P.), Thomas Gilchrist, M.A. (A., P., M.), John Aitken Gilfillan (A., P., M.), Peter Gordon (A., M.), Robert Masson Greig (A., P.), Alexander Hislop Hall (A., P., M.), David Cochrane Hanson (A., P.), David Hardie, M.A. (A., P.), Fergus Leslie Henderson (A., P., M.), John Wishart Welsh Hewitt (A.), Thomas Cameron Houston (A., P.), William Yuill Jamieson (P.), Alastair Caulfield Jebb (A., P.), David Johnston (A., P., M.), Douglas Reid King (A., M.), Peter Cunningham M'Arthur, M.A. (A.), Daniel Steel M'Bean (A., P., M.), George M'Callum (A., M.), Joseph M'Culloch (A., P., M.), Duncan Fraser Macdonald (A., P.), John Bowes M'Dougall (A., P., M.), Charles Robertson M'Intosh M.A. (A., P., M.), Donald M'Intyre (A., P.), Donald M'Donald M'Intyre (A., P.), David Mackie (M.), James Robertson Cowper Mackintosh (M.), Joseph Allan MacLean (P., M.), William Edward M'Lelland (A., P., M.), Frederick William M'Millan (A., P., M.), James Kennedy Manson (A., P.), Andrew Paton Martin (A., P.), William Strelley Martin M.A. (A.), Walter John May (A., P.), Thomas Spence Meighan (A.), William Meikle (A., P.), Alexander Dryden Moffat (A., P., M.), James William Moffatt (A., P., M.), Percival John Moir (A., P., M.), Thomas Augustine O'Brien (M.), William Luddington Peacock (A., P., M.), Andrew Picken (A., P., M.), John M'Lean Pinkerton, B.Sc. (A., P.), John Stuart Prentice (A., P.), Frederick Powlett Rankin (A., P.), Adam Rankine (A., P.), Robert Ray (A., P.), Thomas Forbes Brown Reid (A., P.), Robert Cecil Robertson (P., M.), Stanley Robertson (A., P., M.), Stuart Robertson (A., P., M.), Stuart Dewar Robertson (A., P.), Alexander Forbes Ross (P., M.), Archibald M'Kerrow Russell (A., P., M.), John Sillars (P., M.), Norman M'Gaan Smith (A., P.), John Banks Steven (P.), John Fraser Steven, M.A. (M.), Henry Stewart, M.A. (P., M.), John Symington Stewart (A., P.), William Ballantine Stewart (A.), Robert Tennent (A., P.), Robert Noel Thomson (A., P., M.), William Thomson, M.A. (A., P., M.), James Vallance (A., P.), William Semple Wallace (A., P.), Henry Currie Watson (A.), John Allan White (M.), Clive Alan Whittingham (A.), Joseph Bannister Williamson (A., P.), Alexander Sweet Wilson (M.), John Wylie (A., P., M.), Thomas Wilson Wylie (A., P., M.), Alexander Young (M.), Gavin Young (A., P.), and John Miller Young (A.).

Women.—Margaret Jarvey Brown (M.), Agnes Elizabeth Mary Cooke (A., P., M.), Dagmar Florence Curjel (A., P., M.), Ethel Winifred Gompertz (M.), Florence Scott Kirk (M.), Jessie Gordon M'Laren, M.A. (A., P., M.), Gladys Montgomery (A., P.), Marion Thompson (M.), Sara Adam Watson (A., P., M.), Grace Birrell Whish (M.), and Marguerite Wilson (A., P., M.).

The following have passed the Third Professional Examination for the degrees of Bachelor of Medicine (M.B) and Bachelor of Surgery (Ch.B.) in the subjects indicated (P., Pathology; M., Medical Jurisprudence and Public Health):—

Douglas Kinchin Adams, M.A. (P., M.), Henry Stanley Banks, M.A (P., M.), Abraham Blashky (P., M.), Simon Harry Bloom (P., M.), William Adam Brechin (P., M.), David Peebles Brown (P., M.), Robert Archibald Brown (P., M.), James Law Brownlie (P., M.), Alexander Grahame Buchanan (P., M.), Edmund Tytler Burke (P., M.), John Cameron (M.), William Leonard Cassells, B.Sc. (M.), Benjamin Cohen (P.), Wallace MacCallum Conley, M.A. (P., M.), John Connell (P., M.), Thomas Muir Crawford (P.), Nathaniel Crichlow (P., M.), Lawrence Crombie (P., M.), William Cameron Davidson (P., M.), Gabriel Daniel de Kock (P., M.), Walter Elliot Elliot, B.Sc. (P., M.), Philip Figdor (P.), William Campbell Fleischmann (P., M.), William Fotheringham (P., M.), James Fraser (P., M.), William Fraser (P., M.), James Lochhead Gregory (P., M.), John Galloway Hendry (P., M.), William John Henry (P., M.), George Hislop (P., M.), William Horsby (P., M.), William Muir Howells (P. M.), Douglas Macinnes Hunter (P., M.), Thomas Pollock Inglis (P.), James Scott Kinross (P.), Alexander Lindsay (P., M.), George Smith Livingstone (P.), James Learmont M'Bean (P., M.), Peter Alexander M'Callum (P., M.), John Aloysius M'Connochie (P.), James Walter M'Donald (P., M.), John M'Ghie (P., M.), John MacInnes (P., M.), Donald Mackinnon (P., M.), James Robertson Cowper Mackintosh (M.), Kenneth Norman MacLean, M.A. (P., M.), Robert M'Lean (P., M.), Neil Macleod (P., M.), Robert Martin M'Minn (P.), Ewen Stewart Macphee (P.), William Ebenezer Maitland (P., M.), Osborne Henry Mavor (P.), Archibald Underwood Millar, M.A. (P., M.), Kenneth Duncan Murchison (M.), Arthur Alexander Murison (P.), Michael Murphy (P., M.), Thomas Murray Newton (P., M.), Robert Parker (M.), Andrew Peden (M.), James Leslie Ruthven Philip (P., M.), James Purdie (P.), Angus M'Innes Ramsay (M.), Frank Morton Robertson (P., M.), Neil Islay Sinclair (P., M.), David Smith (P., M.), William Robertson Snodgrass, M.A. (P., M.), Ian Dishart Suttie (P.), George Taylor, M.A. (P., M.), John Cuthbertson Walker (M.), Robert Bruce Wallace (P., M.), James Cairns Watt (P., M.), William Herbert Nairne White (M.), James Whiteside (P., M.), Alexander Sweet Wilson (P.), and Andrew Morton Young (P., M.).

Women.—Nora Maud Aden Allan (P., M.), Cecilia Small Turnbull Anderson (M.), Janet Rankine Anderson (P.), Margaret Jarvey Brown (P.), Ethel Crawford (P.), Mary Pringle Hislop (P.), Jane Kerry M'Elroy Hunter (M.), Annie Rankine M'Kail (P.), Margaret Helen M'Killop (P., M.), Sarah Anderson Jamieson Rankine (P.), and Josephine Adelaide Woods (P., M.).

The following candidates passed with distinction in the subjects indicated:—

First Examination.—In (*a*) Zoology and in (*b*) Chemistry: Kenneth John Talbot Wilson. In (*a*) Physics and in (*b*) Chemistry: Henry Stuart. In Zoology: John Alston, Maud Christine Cairney, Andrew Davidson, Alexander Fisher M'Millan, Margaret Kay Mitchell, John King Rennie, Alexander Wilkie Ritchie, Mary Helen Routledge, John Stirling, George Carson Swanson, and Herbert Watt Torrance. In Chemistry: John Dunbar, Thomas Fleming, and William Mitchell Stewart.

Second Examination.—In (*a*) Anatomy and in (*b*) Physiology: Dagmar Florence Curjel, James William Moffatt, and Andrew Picken. In Anatomy: Robert William Brander, Stanley Robertson, Stuart Robertson, Joseph Bannister Williamson, and Thomas Wilson Wylie. In Physiology: Donald M'Intyre, William Edward M'Lelland, James Kennedy Manson, Gladys Montgomery, John M'Lean Pinkerton, B.Sc., and Robert Tennent.

Third Examination.—In Pathology: William Adam Brechin, Wallace MacCallum Conley, M.A., Douglas Macinnes Hunter, Sarah Anderson Jamieson Rankine, and Frank Morton Robertson. In Medical Jurisprudence and Public Health: David Peebles Brown, William Muir Howells, and James Leslie Ruthven Philip.

The following have satisfied the examiners in the Fourth (Final) Professional Examination for the degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.):—

John Andrew Aitken, John Campbell Hill Allan, James Angus, Johannes Gerhardus Becker, Vynne Borland, Norman Cameron, George Wilson Clark, George Dalziel, Alexander Hugh Davidson, William Tennent Gairdner Davidson, Kinloch Falconer, Archibald Gardner, John Joseph Gibb, Leopold Glushak, Cecil William Fletcher Greenhill, John Alexander Harper, M.A., Alexander

Gibson Henderson, Andries Johannes Joubert, Felix Arthur Kerr, Thomas Joseph Kirk, Robert Patrick Archibald Kirkland, John Finlayson Lang, M.A., Frank Whitwell Kinnear Lawrie, Norman Veitch Cunningham Lothian, B.Sc., Crawford Lundie, M.A., B.Sc., Donald Meek, Stuart Spence Meighan, B.Sc., Michael John Murray, Andrew Neilson, John Boyd Orr, M.A., B.Sc., John Clark Pyper, Alexander Rae, Lucy MacBean Ross, Samuel Rutherford, Hendrik Cornelius van der Wat Smit, Malcolm Sommerville, Lawrence Tweedie Stewart, Thomas Walmsley, Tom Waterhouse, Egerton Carl White, William Whitelaw, Hugh Gilmer Wilson, and William Brockie Wilson.

The following passed with distinction in the subjects indicated:—

Surgery and Clinical Surgery.—John C. Pyper.
Practice of Medicine and Clinical Medicine.—William B. Wilson.
Midwifery.—John F. Lang, M.A., Norman V. C. Lothian, B.Sc., Stuart S. Meighan, B.Sc., and John B. Orr, M.A., B.Sc.

A DEVONSHIRE CENTENARIAN.—Mrs. Sleep, of Barnstaple, recently celebrated the 100th anniversary of her birthday. She received a congratulatory message from the King.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—At a meeting of the College held on April 10th, Mr. Robert H. Woods, President, being in the chair, Mr. F. T. Porter Newell was elected a member of the Council. On the following day, at a meeting of the Council, Mr. G. Jameson Johnston was elected Professor of Surgery.

HUNTERIAN SOCIETY.—On April 10th, Dr. W. Langdon Brown, Vice-President, being in the chair, the third annual award of the society's medal was made to Dr. A. Goulston of Heavitree, Exeter, for his essay on "The Use of Sugar in Heart Disorders." Dr. Goulston, after receiving the medal, read an abstract of his winning essay.

GLOUCESTERSHIRE ROYAL INFIRMARY.—The annual meeting of the subscribers of the Gloucestershire Royal Infirmary was held last week under the presidency of Colonel Curtis Hayward. The financial statement showed that the income amounted to £7592, and an unfavourable balance of £203 remained at the end of 1911. The medical report stated that during the year 1577 in-patients were admitted and 8645 out-patients were treated.

UNDER the patronage of the King and Queen and Princess Christian of Schleswig-Holstein, the "One Hundred Years Ago" costume ball, in aid of the Incorporated Soldiers and Sailors Help Society, will be held at the Albert Hall, London, on Thursday, June 6th. All correspondence should be addressed to the honorary secretary, 122, Brompton-road, S.W. Among the quadrilles will be one representing "Medicine," to be arranged by Lady Dawson.

DEVON AND CORNWALL EAR AND THROAT HOSPITAL, PLYMOUTH.—The annual meeting of the friends of this institution took place last week, under the presidency of the Mayor. The medical report stated that during 1911 the patients treated numbered 1145, compared with 1027 in 1910. The financial statement showed that a small favourable balance remained at the close of the year. It was reported that the committee had sufficient funds in hand for a reasonable scheme for alteration and rebuilding of the institution, and that plans had been prepared for that purpose.

AT a meeting of the medical profession held in Brighton on April 16th, the following resolution was passed *nem. con.*:—

That the members of the medical profession in this town are of opinion that the proposed additional appointment of full-time medical officers for the treatment of school children is both undesirable and unnecessary, and that they would resent the introduction of such men into the town.

Every practitioner in the district was invited to attend the meeting.

THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.—The summer term for clinical lectures and demonstrations will begin on May 7th when Dr. Frederick Batten will take for his subject Combined Degeneration of the Spinal Cord. On successive Fridays and Tuesdays the lectures and demonstrations will be given by some of the following gentlemen: Mr. Donald J. Armour, Dr. E Farquhar Buzzard, Dr. James Collier, Dr. Gordon M. Holmes, Dr J. A. Ormerod, Mr. Leslie J. Paton, Dr. J. S. Risien Russell, Mr. Sydney R. Scott, Mr. Percy Sargent, Dr. T. Grainger Stewart, Dr. James Taylor, and Dr. W. Aldren Turner.

UNIVERSITY OF LONDON.—A course of four lectures on "Heredity Considered from the Point of View of Physiology and Pathology" will be delivered by Dr. F. W. Mott, F.R.S., in the Physiological Laboratory, King's College, on Mondays, May 20th and 27th, and June 3rd and 10th, at 4.30 P.M. The lectures are free to members of King's College, London, to internal students of the University, to medical students in London, and to medical men on presentation of their cards.

THE committee of the forthcoming Exhibition of Designs for Mural Paintings and for the Decoration of Schools, &c., announce a competition for the decoration of the vestibule of the Middlesex Hospital. Mr. Edmund Davis, a governor of the hospital, has generously arranged for the rebuilding of the entrance with a view to mural decoration. The circular giving particulars may be obtained from the honorary secretaries, Mural Decoration Committee, Crosby Hall, S.W.

QUEEN'S HOSPITAL, BIRMINGHAM.—The seventy-first annual report of this institution makes an urgent appeal for subscriptions, the balance of expenditure over income at the close of 1911 being £5016. The number of in-patients treated was 3172, and the number of out-patients 39,743. The Queen's Hospital Aid Society, which assists necessitous patients by providing them with sanatorium letters, food, clothing, and coals, has done good work during the year, and the treasurer's report shows a small favourable balance due to restricted expenditure.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Medical Treatment of School Children.

THE regulations under which grants in respect of medical treatment and care of children attending public elementary schools and certain special schools in England and Wales will be made by the Board of Education during the year ending March 31st, 1913, have been presented to Parliament. These grants will be distributed at the discretion of the Board of Education, and in the exercise of its discretion the Board will take into account a number of factors. In fixing the grant to local education authorities in respect to the medical treatment of children attending public elementary schools the Board will take into considerations '(*a*) the number of children in attendance at public elementary schools maintained by the authority; (*b*) the assessable value of the area; (*c*) the actual expenditure incurred by the authority in respect of their school medical service; (*d*) the extent to which other agencies for providing treatment in the area are utilised; (*e*) the co-ordination of the arrangements for medical inspection; (*f*) the completeness of the arrangements made by the authority for the medical supervision of school children and the efficiency of the working of such arrangements as ascertained by the Board from reports made by their medical officers or otherwise.

It is provided that no grant will be made to a local education authority unless the Board are satisfied that the authority's provision for medical inspection is suitable and efficient or, in respect of medical treatment, unless the authority's scheme of treatment has been sanctioned under Section 13 (1) (*b*) of the Education (Administrative Provisions) Act, 1907.

Other regulations apply to children attending "special schools." These are schools which are certified by the Board of Education under the Elementary Education (Defective and Epileptic Children) Act, 1899, and are conducted in accordance with the regulations of the Board of Education applicable to such schools. Grants will be made under these regulations only in respect of the medical treatment and care of children—(1) in residential (open-air) schools for children suffering from tuberculosis, certified by the Board under the Elementary Education (Defective and Epileptic Children) Act, 1899; (2) in day (open-air) schools, similarly certified, for children suffering from pulmonary tuberculosis; and (3) in day (open-air) schools, similarly certified, for children suffering from other forms of tuberculosis or from other ailments for which open-air treatment is specially suitable.

Deaths from Privation.

On the motion of Mr. HERBERT LEWIS the House of Commons has ordered a return of the number of deaths in England and Wales in the year 1911 upon which a coroner's jury has returned a verdict of death from starvation or death accelerated by privation, together with any observations furnished to the Local Government Board by boards of guardians with reference to cases included in the return. This return is an annual one.

Mental Defectives Bill.

Mr. HILLS has introduced in the House of Commons a Bill "to amend

the law relating to mentally defective and epileptic persons." It has been read a first time. The Bill is backed by Mr. ACLAND ALLEN, Mr. DICKINSON, Mr. GODFREY LOCKER-LAMPSON, Sir ALFRED MOND, and Mr. POLLOCK.

The Extension of the Boundaries of Glasgow.

A Bill to annex to the city of Glasgow several adjacent burghs, including Govan, Partick, Rutherglen, and Pollokshaws, is under the consideration of one of the private Bill committees of the House of Commons. One of the arguments put forward by Mr. BALFOUR BROWNE, K.C., in support of the Bill was the desirability of having one health authority for the whole of the combined area, with whole-time medical officers of health.

HOUSE OF COMMONS.

MONDAY, APRIL 15TH.

The Illuminant of the House of Commons.

Mr. KING asked the honourable Member for St. George's-in-the-East, as representing the First Commissioner of Works, whether any report had been received from an oculist consultant on the respective merits of gas and electricity as an illuminant for the House of Commons, and, if so, what was the purport of the report.—Mr. WEDGWOOD BENN said in reply: The oculist's report has not yet been made, but when received it shall be laid on the table of the House.

Preserved Cream Boracised.

Mr. CHARLES BATHURST asked the President of the Local Government Board whether he had yet decided upon another and less alarming description for chemically-preserved cream in place of "Preserved Cream Boracised," for insertion in invoices and the labelling of cream receptacles in compliance with the Board's new regulations.—Mr. BURNS answered: I have not yet come to a final decision, but the honourable Member may rest assured that I will not overlook the point.

Pauper Lunatics and Idiots.

Mr. ORMSBY-GORE asked the President of the Local Government Board what was the number of feeble-minded persons in Poor-law union workhouses and the number of feeble-minded, including certified lunatics, maintained by Poor-law guardians in county and borough asylums; whether any return had been made in connexion with these persons since Jan. 1st, 1906; and whether he would ask for a more up-to-date return from boards of guardians without delay.—Mr. BURNS replied: The total number of pauper lunatics or idiots on Jan. 1st, 1912, in county and borough asylums, registered hospitals, and licensed houses was 96,883. The latest return of feeble-minded persons other than certified lunatics was obtained on Jan. 1st, 1906, and related to persons under 60 years of age. According to that return, the number of such persons in workhouses or other Poor-law establishments in England and Wales was 8775. I do not think there would be any special advantage in obtaining another return of this character at the present time.

The Promotion of Naval Surgeons.

Lord CHARLES BERESFORD asked the First Lord of the Admiralty to state how many applications had been received by the Admiralty from naval surgeons for accelerated promotion to staff-surgeon under the regulations issued by the Admiralty on Oct. 31st, 1905; how many of these applications had been granted; and how many applications it was the intention of the Admiralty to grant.—Mr. MACNAMARA (on behalf of Mr. CHURCHILL) wrote in reply: The answer to the first part of the noble lord's question is 14, 11 of whom were found to be ineligible for various reasons. As regards the second part, two have been promoted and a third will be promoted next month. In reply to the third part of the question, each case will be dealt with on its merits, full consideration being given to the officer's record and his professional ability.

TUESDAY, APRIL 16TH.

Sleeping Sickness Research.

Dr. CHAPPLE asked the Secretary of State for the Colonies whether his attention had been called to the additional evidence published in the Annals of Tropical Medicine and Parasitology, issued by the Liverpool School of Tropical Medicine, in confirmation of the view that game in Nyasaland was a reservoir and Glossina morsitans a carrier of the trypanosome of sleeping sickness; and whether he was now prepared to take such steps as should tend to protect human life, domestic animals, and British trade from the consequences of this disease.—Mr. L. HARCOURT replied: I am informed that, as my honourable friend indicates, Dr. Kinghorn and Dr. Yorke, of the British South African Commission, working in the Luangwa Valley, Northern Rhodesia, have shown satisfactorily that Glossina morsitans transmits, in nature as well as in laboratory experiments, the human trypanosomiasis of that region, and that certain wild animals are naturally infected with the human trypanosome. With regard to the first finding it follows that every effort must be made in Nyasaland and Rhodesia to destroy, where it is possible, and elsewhere to avoid this species of tsetse fly. I am advised, however, that the second finding requires more examination. The Commission examined 98 wild animals, of which 77 were antelope and 8 were pig; it was in these animals—viz., in seven antelope and one pig—that human trypanosomes were found. They do not record any examinations of domestic animals, except that of one dog, and it is noteworthy that in this animal also human trypanosomes were found. But it has been shown elsewhere that cattle and other domestic animals may harbour human trypanosomes without detriment to health. Consequently it is probable that domestic animals in Rhodesia (and equally Nyasaland), which are subject to the bites of Glossina morsitans, also harbour the human trypanosome. This requires investigation, and if they are found to do so it will greatly complicate the problem because it is out of the question to decree the destruction of all domestic animals in Nyasaland. I assume that my honourable friend wishes to kill off all or a great number of the large wild animals in Nyasaland, and that he advocates this on one of two assumptions—either (*a*) that the tsetse fly cannot exist without them, and therefore will die out when they disappear; or (*b*) that the large wild animals form the reservoir of the virus which the tsetse transfers to man. As regards (*a*) there is much contrary evidence, and as regards (*b*) there is probability that the domestic animals are serving equally as a reservoir. It might well happen, then, that, as a result of exterminating or greatly reducing the game, the tsetse, unable to obtain blood from these animals, would attack man and the domestic animals to a yet greater extent than it does at present, and that if, as is probable, these domestic animals harbour the human trypanosome, human beings would become infected in increased proportion owing to close association with their flocks and herds. I do not maintain that this would happen, but I am advised that it undoubtedly might, and such a possibility should make us pause before taking decisive action on the evidence before us. An attempt made in Nyasaland to get the game in a certain area killed off was after 12 months unsuccessful, though the natives were encouraged to shoot. It would be well to bring such an experiment to a successful conclusion before deciding to attempt the same thing on a large scale. The matter is, of course, urgent, and it is of vital importance to Nyasaland, but I do not think that anything will be lost by waiting a few months for a report from the Royal Society's Commission which is investigating the connexion between sleeping sickness and the African fauna in all its aspects. No fresh cases of infection either in Nyasaland or Rhodesia have been reported during the present year.

Medical Treatment of School Children.

Mr. CHARLES BATHURST asked the President of the Board of Education whether the grants to be made to public elementary schools out of the sum of £60,000 proposed to be applied towards the medical treatment of school children in England and Wales would depend upon any and, if any, what proportion of the cost of such treatment being borne by the ratepayers in the administrative areas receiving them; and whether the existence of voluntary agencies for providing such treatment in any such area would strengthen its claim in the eyes of the Board when considering the amount of the proposed grant, or whether, alternatively, the existence of such agencies would operate to reduce the Board's grant for this purpose.—Mr. J. A. PEASE answered: As indicated in the regulations the grants towards medical treatment of school children will depend to some extent upon the expenditure of the local education authorities, but until the Board has received precise information as to the work done and the money spent by the various authorities, it is impossible to determine how the sum at our disposal will be apportioned or to indicate what proportion the grant will bear to the cost of treatment. The Board desires local education authorities to utilise voluntary agencies as far as possible, and the extent to which they do so is one of the factors which will be taken into consideration in assessing the grant to be paid.

WEDNESDAY, APRIL 17TH.

The Sanatorium Benefit under the Insurance Act.

Mr. GOLDMAN asked the Secretary to the Treasury, in view of the fact that the National Insurance Act came into operation on July 15th, from which date every insured person who might suffer from consumption was entitled to sanatorium treatment, whether any, and what, provisions were being made to give effect to this part of the Act; whether, pending an arrangement being arrived at with the doctors, a special authority certifying sanatorium patients and treating them would be created; and whether, in the event of sufficient beds not being available, what course he proposed to take with regard to the contributions from insured persons in respect of sanatorium treatment.—Mr. MASTERMAN replied: Sanatorium benefit will commence from July 15th, but it will be impossible to give all patients requiring treatment in sanatoria such treatment until sufficient sanatoria have been provided. In the event of Local Insurance Committees not being constituted by that date, other means will be provided for selecting those who will be recommended for treatment in sanatoria. Any money necessarily unexpended owing to insufficiency of accommodation at the commencement of the working of the Act will be available for later benefit, and the whole subject is being considered by the Committee on Tuberculosis.

Sir CLEMENT KINLOCH-COOKE: What steps are being taken to provide the extra sanatoria which are necessary?—Mr. MASTERMAN: The whole matter is under the consideration of the Local Government Board, and investigation is being made as to how far at present private accommodation is available.

Mr. PETO: In the event of the Local Insurance Committees not being set up by July 15th, do the Government propose to amend the Act by an amending Bill or do they propose to override the Act?—Mr. MASTERMAN: There is full power under Clause 78 to produce the results which I have indicated.

BOOKS, ETC., RECEIVED.

BAILLIÈRE, TINDALL, AND COX, London.

A Dictionary of Treatment, including Medical and Surgical Therapeutics. By Sir William Whitla, M.A., M.D., LL.D., Professor of Materia Medica and Therapeutics in Queen's University, Belfast. Fifth edition. 28th thousand. Price 16s. net.

CONSTABLE AND CO., LIMITED, 10, Orange-street, Leicester-square, London, W.C.

Post Mortems and Morbid Anatomy. By Theodore Shennan, M.D., F.R.C.S. Edin., Pathologist to the Royal Infirmary, Edinburgh. Price 18s. net.

Handbook of the Technique of the Teat and Capillary Glass Tube, and its Applications in Medicine and Bacteriology. By Sir A. E. Wright, M.D., F.R.S., Director of the Department for Therapeutic Immunisation, St. Mary's Hospital, London, W.; late Professor of Pathology, Army Medical School, Netley. Price 10s. 6d. net.

The Care Committee. The Child and the Parent. A Small Volume containing the History of the Provision of Meals to the Children of Poor Parents, and an Accoutn of Children's Care Committees, &c. Douglas Pepler. Price 2s. 6d. net.

Tunnel Shields and the Use of Compressed Air in Subaqueous Works. By William Charles Copperthwaite, M.Inst.C.E., Bridges Engineer of the London County Council; sometime Resident Engineer of the Central London Railway and of the Greenwich Footway Tunnel. With 260 Illustrations and Diagrams. Second edition, revised. Price 31s. 6d. net.

SAUNDERS (W. B.) COMPANY, Philadelphia and London.

Pellagra. An American Problem. By George M. Niles, M.D., Professor of Gastro-Enterology and Therapeutics, Atlanta School of Medicine. Price, cloth, 13s. net.

Duodenal Ulcer. By B. G. A. Moynihan, M.S. Lond., F.R.C.S., Leeds. Second edition, enlarged. Illustrated. Price, cloth, 21s. net.

The Immediate Care of the Injured. By Albert S. Morrow, A.B., M.D., Adjunct Professor of Surgery in the New York Polyclinic. Second edition. Thoroughly Revised. Price, cloth, 12s. net.

SMITH, ELDER, AND CO., London.

A Nurse's Life in War and Peace. By E. C. Laurence, R.R.C., Author of "Modern Nursing in Hospital and Home." With a Preface by Sir Frederick Treves, Bart., G.C.V.O., C.B., LL.D. Price 5s. net.

SPON, E., AND F. N., LIMITED, 57, Haymarket, London. SPON AND CHAMBERLAIN, 123, Liberty-street, New York.

Engineering Work in Public Buildings. Power, Lighting, Heating, Ventilation, Water Supply. A Reference Book for all engaged in the Design and Construction of Asylums, Hospitals, Colleges, Hotels, and other large Institutions. By R. Owen Allsop, Architect, Author of "Public Baths and Wash-houses," &c. Price 12s. 6d. net.

SWIFT, STEPHEN, AND CO., LIMITED, 10, John-street, Adelphi, London.

The Mastery of Life. By G. T. Wrench, M.D. Lond. Price 15s. net.

THIEME, GEORG, Rabensteinplatz, 2, Leipzig.

Gesammelte Werke von Robert Koch. Unter Mitwirkung von Prof. Dr. G. Gaffky, Geh. Ober-Med.-Rat in Berlin, und Prof. Dr. E. Pfuhl, General-Ober-Arzt a.D. in Berlin. Herausgegeben von Prof. Dr. J. Schwalbe, Geh. San.-Rat in Berlin. 3 Bände. Price, boards, M.80; bound, M.88.

WILSON, EFFINGHAM, 54, Threadneedle-street, London, E.C.

Income-Tax. How to Make the Return and Prepare Accounts in Support, How to Recover Excess paid, or obtain Reduction. With Appendix of Settled Cases. By F. B. Leeming, Accountant. Price 2s. 6d. net.

WRIGHT, JOHN, AND SONS, LIMITED, Bristol. SIMPKIN, MARSHALL, HAMILTON, KENT, AND CO., LIMITED, London.

The Medical Annual: A Year-Book of Treatment and Practitioner's Index. 1912. Thirtieth Year. Price 8s. 6d. net.

An Index of Differential Diagnosis of Main Symptoms. By Various Writers. Edited by Herbert French, M.A., M.D. Oxon., F.R.C.P. Lond., Assistant Physician to Guy's Hospital. Price 30s. net.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

BUTCHER, W. J., M.R.C.S., L.R.C.P. Lond., D.P.H., has been appointed Medical Officer of Health and Assistant School Medical Officer for the West Sussex Southern Combined District.

CANNING, W., M.B., B.S. R.U.I., has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Rockcorry District of the county of Monaghan.

DARROCH, MARGARET B. S., M.B., B.S. Glasg., has been appointed Resident Medical Officer at the Children's Hospital, Sunderland.

EASMON, M. C. F., M.R.C.S., L.R.C.P., has been appointed Resident Medical Officer at the County Hospital, Huntingdon.

EDLESTON, R. S. C., M.R.C.S., L.R.C.P. Lond., has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Baslow District of the county of Derby.

FELDMAN, W. M., M.B., B.S. Lond., M.R.C.S., L.R.C.P. Lond., has been appointed Non-Resident House Surgeon to West London Hospital.

FIRTH, JOHN LACY, M.D., M.S. Lond., F.R.C.S. Eng., L.R.C.P. Lond., has been reappointed Honorary Surgeon to the Bristol General Hospital.

FORD, E. G., M.B., B.S. Edin., has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Wolston District of the county of Warwick.

HURLEY, D. J., L.R.C.P. & S. Irel., has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Newcastle District of the county of Limerick.

JOHNSTON, G. JAMESON, M.B., B.Ch. R.U.I., F.R.C.S. Irel., has been appointed Professor of Surgery at the Royal College of Surgeons in Ireland.

MOORE, W. W., M.B., B.S. R.U.I., has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Drum District of the county of Monaghan.

RAE, H. J., M.D. Aberd., has been appointed Assistant Medical Officer at the Kingseat Asylum.

RATTRAY, J. M., M.D. Aberd., has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Frome District of the county of Somerset.

RIDLEY, W. R., M.B., B.S. Edin., has been appointed House Physician at the Royal Infirmary, Sunderland.

THOMSON, G. F., M.B., M.S. Aberd., has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Braemar District of the county of Aberdeen.

TYLECOTE, FRANK EDWARD, M.D., D.P.H. Vict., M.R.C.P. Lond., has been appointed Second Visiting Physician to the South Manchester Workhouse Infirmary, Withington.

VIEYRA, P., M.B., B.S. Edin., has been appointed Junior House Surgeon at the Royal Infirmary, Sunderland.

VOISIN, ALEXANDER B., M.R.C.S., L.R.C.P. Lond., L.S.A. Lond., has been appointed Medical Officer of the Poorhouse and Infirmary, Jersey.

WILLIAMSON, J. B., M.B., B.S. Durh., has been appointed Medical Officer for the Workhouse Hospital at Tynemouth.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

AGRA, UNITED PROVINCES, INDIA, DUFFERIN HOSPITALS AND FEMALE MEDICAL SCHOOL.—Female Senior Doctor. Salary £26 13s. 4d. per mensem, with free quarters.

BARROW-IN-FURNESS, NORTH LONSDALE HOSPITAL.—House Surgeon. Salary £100 per annum, with board, residence, &c.

BEDFORD COUNTY HOSPITAL.—Assistant House Surgeon. Salary £80 per annum, with board, lodging, and laundry.

BOOTLE BOROUGH HOSPITAL.—Junior House Surgeon. Salary £80 per annum, with residence, board, and laundry.

BRADFORD CHILDREN'S HOSPITAL.—House Surgeon. Salary £100 per annum.

BRENTFORD UNION INFIRMARY, WORKHOUSE, AND SCHOOLS.—Second Assistant to Medical Superintendent, unmarried. Salary £125 per annum, with apartments, rations, washing, &c.

BRISTOL ROYAL HOSPITAL FOR SICK CHILDREN AND WOMEN.—Senior Resident Officer. Salary £90 per annum, with board, rooms, attendance, and laundry. Also Junior Resident Officer. Salary £80 per annum, with board, rooms, and attendance.

BURNLEY UNION WORKHOUSE.—Resident Assistant Medical Officer, unmarried. Salary £150 per annum, with apartments, rations, washing, and attendance.

BURY INFIRMARY.—Junior House Surgeon. Salary £80 per annum, with board, residence, and laundry.

BURY ST. EDMUNDS, WEST SUFFOLK GENERAL INFIRMARY.—Resident Medical Officer, unmarried. Salary £100 per annum, with board, lodging, and laundry.

BUXTON, DERBYSHIRE, DEVONSHIRE HOSPITAL.—Pathologist. Salary at rate of £250 per annum.

CANCER HOSPITAL, Fulham-road, S.W.—Assistant Anæsthetist. Salary 25 guineas per annum.

CHARING CROSS HOSPITAL MEDICAL SCHOOL.—Demonstratorship in Pathology. Salary £150 per annum.

CHESTER GENERAL INFIRMARY.—House Physician. Salary £90 per annum, with residence and maintenance.

CUMBERLAND COUNTY COUNCIL.—Junior Assistant to Medical Officer of Health. Salary £225 per annum.

DENBIGH, DENBIGHSHIRE INFIRMARY.—House Surgeon. Salary £100 per annum, with board, residence, and washing.

DORCHESTER, DORSET COUNTY HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum, with board and residence.

DUDLEY, GUEST HOSPITAL.—Senior Resident Medical Officer. Salary 100 guineas per annum, with board, residence, and attendance.

DUNDEE DISTRICT ASYLUM.—Senior Resident Medical Officer. Salary £150 per annum. Also Junior Resident Medical Officer. Salary £120 per annum. Each with board and apartments.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, London, S.E.—House Surgeon for six months. Salary at rate of £75 per annum, with board, residence, and washing. Also Aural Surgeon.

EWELL, SURREY, EPILEPTIC COLONY.—Junior Assistant Medical Officer, unmarried, for six months. Salary £170 per annum, with board, apartments, and washing.

HITHER GREEN, S.E., PARK HOSPITAL FOR CHILDREN.—Assistant Medical Officer. Salary £150 per annum, with board, lodging, and washing.

HOSPITAL OF ST. JOHN AND ST. ELIZABETH, 40, Grove End-road, N.W.—Resident Medical Officer, unmarried, for six months. Salary at rate of £80 per annum, with rooms, board, laundry, and attendance.

HUDDERSFIELD ROYAL INFIRMARY.—Junior House Surgeon. Salary £60 per annum, with board, residence, and washing.

LEEDS GENERAL INFIRMARY.—Resident Obstetric Officer, House Surgeon, and House Physician for six months. Board, residence, and washing provided. Also Resident Medical Officer at the Ida and Robert Arthington Hospitals for six months. Salary £30, with board, residence, and washing.

LEEDS TUBERCULOSIS ASSOCIATION SANATORIUM, Gateforth, near Selby.—Resident Medical Officer for six months. Salary at rate £100 per annum, with board, lodging, and washing.

LEICESTER INFIRMARY.—House Surgeon. Salary at rate of £120 per annum, with board, apartments, and washing. Also Assistant House Surgeon for six months. Salary at rate of £80 per annum, with board, apartments, and washing.

LINCOLN COUNTY HOSPITAL.—Junior House Surgeon, unmarried, for six months. Salary at rate of £100 per annum, with board, residence, and washing.

LIVERPOOL, CITY INFECTIOUS DISEASES HOSPITAL.—Assistant Resident Medical Officer, unmarried. Salary £120 per annum, with board, washing, and lodging.

LONDON HOSPITAL, Whitechapel, E.—Obstetrical Registrar and Tutor.

LONDON TEMPERANCE HOSPITAL.—Assistant Resident Medical Officer for six months. Salary at rate of 50 guineas per annum, with board, residence, and washing.

LOUGHBOROUGH AND DISTRICT GENERAL HOSPITAL AND DISPENSARY.—Resident House Surgeon. Salary £120 per annum, with rooms, attendance, board, and washing.

MACCLESFIELD GENERAL INFIRMARY.—Senior House Surgeon. Salary £100 per annum, with board and residence.

MANCHESTER, CHORLTON-ON-MEDLOCK DISPENSARY.—Honorary Medical Officer.

MANCHESTER ROYAL EYE HOSPITAL.—Junior House Surgeon. Salary £80 per annum, with residence, board, and washing.

MARGATE, ROYAL SEA BATHING HOSPITAL FOR SURGICAL TUBERCULOSIS.—Resident Surgeon. Salary at rate of £100 per annum, with board, residence, and laundry.

METROPOLITAN EAR, NOSE, AND THROAT HOSPITAL, Grafton-street, Fitzroy-square, W.—Assistant Surgeon and Clinical Assistants.

METROPOLITAN HOSPITAL, Kingsland-road, N.E.—House Physician and House Surgeon. Salary at rate of £60 per annum. Also Assistant House Physician and Assistant House Surgeon. Salary at rate of £40 per annum. Each with board and washing, and all for six months.

NORTHUMBERLAND HOUSE, FINSBURY PARK, London, N.—Medical Superintendent, unmarried. Salary £300 per annum.

NORWICH, NORFOLK AND NORWICH HOSPITAL.—House Surgeon, unmarried. Salary £80 per annum, with board, lodging, and washing. Also Casualty Officer for six months. Salary £60 per annum, with board, lodging, and washing. Also Resident Surgical Officer, unmarried. Salary £100 per annum, with board, lodging, and washing.

PUTNEY HOSPITAL, Putney Common, S.W.—Two Honorary Physicians, Two Hononary Surgeons, One Honorary Consulting Obstetric Physician, One Honorary Anæsthetist, and One Honorary Medical Electrician. Also Resident Medical Officer. Salary £100 per annum, with rooms, board, and laundry.

READING, ROYAL BERKSHIRE HOSPITAL.—House Physician and Second House Surgeon for six months. Salary in each case £80 per annum, with apartments, board, and washing.

ROCHESTER, ST. BARTHOLOMEW'S HOSPITAL.—Resident House Physician. Salary at rate of £110 per annum, with board, residence, and laundry. Also Resident House Surgeon, unmarried. Salary at rate of £150 per annum, with board, residence, and laundry.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William-street, West Strand, W.C.—House Surgeon for six months. Salary £25, with board, residence, and laundry. Also Assistant House Surgeon for six months. Salary £20, with luncheon and tea.

ST. AUSTELL UNION AND RURAL DISTRICT COUNCIL.—Medical Officer. Salary at the rate of £390 per annum.

ST. MARY'S HOSPITAL FOR WOMEN AND CHILDREN, Plaistow, E.—Assistant Resident Medical Officer, unmarried, for six months. Salary at rate of £80 per annum, with board, residence, and laundry.

SALFORD ROYAL HOSPITAL.—Junior House Surgeon for six months. Salary at rate of £65 per annum, with board and residence.

SOUTHAMPTON UNION WORKHOUSE INFIRMARY, Shirley Warren.—Resident Assistant Medical Officer. Salary £130 per annum, with apartments, rations, washing, and attendance.

STAFFORD, STAFFORDSHIRE GENERAL INFIRMARY.—House Physician. Salary £82 per annum, with board, residence, and laundry.

STOCKPORT INFIRMARY.—Junior House Surgeon. Salary £80 per annum, with board, washing, and residence.

STOKE-ON-TRENT INFECTIOUS DISEASES HOSPITAL, Bucknall.—Resident Assistant Medical Officer (female). Salary £100 per annum, with apartments, board, washing, and attendance.

SUNDERLAND ROYAL INFIRMARY.—Junior House Surgeon for six months. Salary £80 per annum, with board, residence, and laundry.

TORQUAY, TORBAY HOSPITAL.—Resident Medical Officer. Salary £100 per annum, with residence, board, and washing.

UNIVERSITY COLLEGE HOSPITAL, Gower-street, W.C. — Resident Medical Officer.

WAKEFIELD GENERAL HOSPITAL.—Senior House Surgeon, unmarried. Salary £120 per annum, with board, lodging, and washing. Also Junior House Surgeon, unmarried. Salary £100 per annum, with board, lodging, and washing.

WESTMINSTER HOSPITAL, Broad Sanctuary, S.W.—Assistant Physician.

WINCHESTER, ROYAL HAMPSHIRE COUNTY HOSPITAL.—House Physician. Also House Surgeon. Salary in each case £80 per annum.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Resident Medical Officer. Salary at rate of £100 per annum, with board, rooms, and laundry. Also House Surgeon for six months. Salary £80 per annum, with board, rooms, and laundry.

THE Chief Inspector of Factories, Home Office, London, S.W., gives notice of vacancies as Certifying Surgeons under the Factory and Workshop Acts at Bath, in the county of Somerset; and at Croom, in the county of Limerick.

Births, Marriages, and Deaths.

BIRTHS.

BINNS.—On April 7th, at Carlisle Villa, Bow-road, E., the wife of John Braybrooke Binns, M.R.C.S., L.R.C.P. Lond., of a daughter.

IRVINE.—On March 22nd, at 18 Cantonments, Cawnpore, India, the wife of Maurice L. C. Irvine, M.B. Lond., Indian Medical Service, of a son.

THURNELL.—On April 10th, at Woodville, Gravesend, the wife of H. L. Thurnell, M.A., M.D., of a son.

MARRIAGES.

AMSLER—FAIRBANK.—On April 10th, at the Parish Church, Windsor, Maurice Amsler, M.B., B.Sc., to Victoria, second daughter of William Fairbank, M.V.O., J.P., Surgeon to H.M. Household at Windsor Castle.

FINCH—FOSTER.—On April 11th, at St. Peter's, Rickmansworth, by the Rev. F. A. Murray, late vicar of the parish, assisted by the Rev. Walter Breffit, vicar, George Finch, M.R.C.S., D.P.H., only son of the late George Finch, of the Stock Exchange and Kensington, to Winifred, second daughter of George Carey Foster, F.R.S., J.P., of Ladywalk, Rickmansworth.

MCBRIDE—MELLERSH.—On April 13th, at Christ Church, Harrogate, James Graham McBride, M.B., F.R.C.S. Edin., to Kitty, only daughter of Arthur Mellersh, Fernhurst, Harrogate.

DEATHS.

ADDISON.—At Hampstead, on April 11th, of meningitis, Paul Fanthorpe, youngest child of Christopher Addison, M.P., and Isobel Addison, aged 2 years and 7 months.

CAMPBELL.—On April 14th, 1912, at his residence, Lornecliff, Calne, Wilts, Donald Campbell, M.D., aged 70 years.

MEADOWS.—On April 9th, at Otley, Ipswich, Suffolk, George Frederick Walford Meadows, M.R.C.S. Eng., L.S.A. Lond., aged 70 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

CHILDREN AND MENDICANCY.

THE practice of exposing children in the streets with a view to inducing the benevolent to give alms is well known and has long been condemned as one physically and morally prejudicial to the children so made use of, who are credibly stated to be sometimes hired for the purpose. The Children Act, 1908, S. 14, which was apparently intended by the legislature to put a stop to this practice, commences as follows:—

> "If any person causes or procures any child or young person ..... to be in any street, premises, or place for the purpose of begging or of receiving alms, or of inducing the giving of alms, whether or not there is any pretence of singing, playing, performing, offering anything for sale, or otherwise, that person shall, on summary conviction, be liable to a fine not exceeding twenty-five pounds, or alternatively, or in default of payment of such fine, or in addition thereto, to imprisonment, with or without hard labour for any term not exceeding three months."

This would seem to cover the case of a woman standing in the gutter with a child 2 years and 8 months old in her arms, and at the same time offering matches for sale. Such a woman was charged recently before Mr. Plowden presumably with an offence under the section quoted, and the policeman who gave evidence had seen her receive money from two persons. He was asked by the learned magistrate whether he heard her beg, and said that he did not, but suggested nevertheless that she had the child with her for the purpose of inducing the giving of alms. Mr. Plowden then asked him, "Is there any harm in a mother carrying her baby or endeavouring to sell matches?" "Does selling matches become a crime if you have a baby in your arms?" To which the policeman replied by adhering to his point that the child was there to incite the giving of alms. Mr. Plowden, however, said that he had never heard such "rubbish," and dismissed the charge, telling the defendant that she had a perfect right to carry her baby and to sell matches. This statement, as far as it goes, may be strictly correct, but at the same time it is not encouraging to the police when they endeavour to protect children and to enforce an Act of Parliament to have a case dismissed without being instructed by the magistrate as to why the facts proved do not constitute the offence suggested. What the explanation would be is not apparent.

SECOND WIND.

To the Editor of THE LANCET.

SIR,—I should be glad to know the physiological explanation of the sense of renewed vigour that arrives at a certain moment in the course of a continuous output of muscular energy. In other words, what is the "second wind" of runners and pugilists?

I am, Sir, yours faithfully,

April 13th, 1912. M.R.C.S.

BREAD AND FOOD REFORM LEAGUE.

FOR the past 30 years the Bread and Food Reform League has been spreading useful information with regard to nourishing and economical foods. Without advocating any special system of diet th league, by means of exhibitions, congresses, meetings, lectures, and the distribution of literature, has reached large numbers of people; but there are still vast numbers of our population who do not realise the importance of pure food for themselves and their children. With the object of enlarging the work of the league an influential letter, signed by the Duchess of Devonshire, Dr. W. A. Bond, the Countess of Bradford, Sir John Byers, Sir James Crichton-Browne, Sir J. Halliday Croom, Dr. Sydney Davies, and others, including many medical men, has been issued. An appeal is made for honorary corresponding secretaries in towns and villages throughout the country. The honorary secretary is Miss May Yates, 5, Clement's Inn, Strand, London, W.C.

THE TEMPERANCE QUESTION.

WE have received a copy of a pamphlet on "The Scientific Aspect of the Temperance Question" (Devizes: The *Wiltshire Advertiser* Office. Price 1*d.*, 9*d.* a dozen, or 5*s.* a hundred), being an address by Dr. H. J. Mackay, delivered at a meeting of the Church of England Temperance Society. It is written with unusual temperateness and commendably scrupulous adherence to accuracy and freedom from exaggeration. The author discusses the degree of capacity in different people for finding pleasure in alcoholic beverages. Some have none at all, and many abstainers belong to this class; many drink merely for the gratification of the palate, principally as a substitute for water with meals; others are not satisfied with anything short of stimulation, and among these are to be found the "nippers"; and, finally, there are those who drink for the narcotic effects, the drunkards. He

insists that those who are temperate are so, not because of the persistent exercise of self-control, but because they do not experience temptation to excess. He insists on the necessity for total abstinence in all cases for children. To check the evils of alcoholism he relies on religious and moral influences, as education, especially of children, but of the public also, and on improvement of the social condition of the poor. With regard to legislation, prohibition and local option are both failures, because at best they only put obstacles in the way of the drunkard's getting drunk; they do not reform or eliminate him. The practice may check moderate drinking, but it leaves the habitual drunkard untouched. "If love laughs at locksmiths, the lover of drink laughs equally at legislation." "Prohibition," he says, "has been tried in America, and has failed." The only effectual legislative way of checking the habitual drunkard is for him to be "treated as a criminal lunatic and effectually prevented from reproducing his kind." Habitual drunkenness would thus be practically weeded out within a few generations. "But," he adds, "for this the time is not yet ripe." Meanwhile, nature is eliminating the unfit, and England is already evolving into a more sober nation.

ECONOMICAL DISHES.

WE have received from the National Food Reform Association another of their little cookery manuals (No. 4), entitled "Economical Dishes for Workers," price 1*d*. It contains 15 recipes for "nourishing, economical, and dainty dishes," the estimated cost of each dish for a family of six persons ranging from 4½*d*. to 7½*d*. The collection includes some excellent and wholesome dishes well known in Italy—e.g., risotto and polenta. While all the dishes given are vegetarian, several form entrées well known to non-vegetarians. The dishes for the most part are nourishing, inexpensive, and agreeable.

Microscopical and "*Had Some.*"—We have examined the questions in connexion with papers set at similar examinations elsewhere, and we have come to the conclusion that they are fair. Some of them have so frequently been set that they are hackneyed. "Microscopical" appears to forget that tuberculosis is a disease of occupation. Parasitology is surely a subject with which a candidate for a Diploma in Public Health should be prepared to deal.

Dr. C. Gorostidi (*Madrid*).—The National Hospital for Diseases of the Heart is in Soho-square, London. At all the principal hospitals for diseases of the chest diseases of the heart receive attention.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

A DIARY OF CONGRESSES.

WE shall publish this diary from time to time that our readers may have under their hands the dates of the approaching scientific Congresses. It is unnecessary to issue the lists of all these functions week by week, and we propose to make only such gatherings as will occur in the immediate future the subject of regular announcement. The following Congresses, Conferences, and Exhibitions are announced for April, May, and June:—

April 12th–30th (London, Olympia).—Ideal Homes Exhibition.
,, 14th–20th (Rome).—Seventh International Congress on Tuberculosis.
,, 21st–24th (Munich).—Twenty-sixth Meeting of the Anatomical Society.
,, 23rd–26th (London, Royal Horticultural Hall).—Fifth Annual Nursing and Midwifery Conference.
May 7th–17th (Washington).—Ninth International Red Cross Conference.
,, 13th (London, Guildhall).—Conference on Diet in Schools.
,, 22nd–30th (London, Chelsea).—Royal International Horticultural Exhibition.
,, 23rd (opens) (Philadelphia).—Twelfth International Congress on Navigation.
,, 23rd–25th (Hanover).—Nineteenth Meeting of the Union of German Laryngologists.
,, 25th–27th (Paris).—International Musical Festival.
,, 26th–28th (Paris).—National Conference of the "Gouttes de Lait."
Whitsuntide (Portrush).—British Esperanto Congress.
May 27th–June 1st (London).—Eighteenth International Congress of Americanists.
,, 29th–31st (Berlin).—Fifteenth Session of the German Society for Gynæcology.
May to October (London, Earl's Court).—Shakespeare's England.
June 11th–14th (Caxton Hall, Westminster).—Second National Conference on the Prevention of Destitution.
,, 17th–29th (London, Olympia).—International Horse Show.
,, 24th–27th (London).—The (Biennial) Health Conference and Exhibition.
,, (London).—Missionary Exhibition.
,, (Atlantic City, N.J.).—Annual Meeting of the American Medical Association.
osis Exhibition.
,, (London, Science Museum, South Kensington).—Second Optical Convention.

Medical Diary for the ensuing Week.

SOCIETIES.

ROYAL SOCIETY, Burlington House, London, W.
Prof. J. S. Townsend: The Diffusion and Mobility of Ions in a Magnetic Field.—Mr. J. J. Manley: On the Observed Variations in the Temperature Coefficients of a Precision Balance (communicated by Prof. E. B. Elliott).—Dr. G. Barlow: On the Torque produced by a Beam of Light in Oblique Refraction through a Glass Plate (communicated by Prof. J. H. Poynting).—Dr. T. C. Porter: Contributions to the Study of Flicker (Paper III.) (communicated by Lord Rayleigh, O.M.).

ROYAL SOCIETY OF MEDICINE, 15, Cavendish-square, W. (temporary address during building of new house).

MONDAY.
ODONTOLOGICAL SECTION (Hon. Secretaries—W. W. James, Stanley Mummery): at 8 P.M.
Paper:
Mr. W. McAdam Eccles and Mr. G. Hopewell-Smith: Teeth in Ovarian Dermoid Cysts.
Casual Communication:
Mr. E. G. Betts: The Complete Eruption into Place of a Devitalised Tooth.

TUESDAY.
MEDICAL SECTION (Hon. Secretaries—Sir John F. H. Broadbent, Bt., Robert Hutchison): at 5.30 P.M.
Paper:
Dr. Gordon Ward: Nodular Leukæmia.

FRIDAY.
SECTION FOR THE STUDY OF DISEASE IN CHILDREN (Hon. Secretaries—T. R. Whipham, H. S. Clogg, Percy G. Lewis), at 11, Chandos-street, W.: at 4.30 P.M.
Cases:
Mr. O. L. Addison: (1) Specimen and Report of Tumours on the Back shown in May, 1911; (2) Exostosis of the Clavicle; (3) Exostosis of the Skull.
Dr. J. D. Rolleston: Destruction of the Uvula in Vincent's Angina.
Dr. F. J. Poynton: Case of Morbus Cordis for Diagnosis.
Dr. D. Forsyth: Gumma of the Lung.
And other Cases.
Paper:
Dr. E. Cautley: Mucous Gastritis in Infants.
EPIDEMIOLOGICAL SECTION (Hon. Secretaries—W. H. Hamer, G. S. Buchanan): at 8.30 P.M.
Paper:
Dr. C. Rundle: The "Bed Isolation" of Cases of Infectious Disease.

MEDICAL SOCIETY OF LONDON, 11, Chandos-street, Cavendish-square, W.
MONDAY.—8.30 P.M., Papers:—Dr. D. Buxton: The Vital Phenomena—Nervous, Circulatory, Respiratory, and Metabolic—occurring under Anæsthesia, and their Relation to the Safety of the Patient.—Mr. E. M. Corner: The Occurrence of so-called Delayed Chloroform Poisoning.

HUNTERIAN SOCIETY, London Institution, Finsbury-circus, E.C.
WEDNESDAY.—8.30 P.M., Annual General Meeting. 9 P.M., Adjourned Discussion on the Therapeutic Value of Alcohol. The President (Dr. Hingston Fox), Sir T. Lauder Brunton, Bart., Mr. C. Mansell-Moullin, Dr. Stoddart, Dr. E. W. Goodall, Dr. Langdon Brown, Dr. Currie, and others will take part in the Discussion. Sir Victor Horsley will reply.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.
MONDAY.—10 A.M., Dr. Simson: Diseases of Women. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye.
TUESDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin.
WEDNESDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Mr. B. Harman: Diseases of the Eye. Dr. Simson: Diseases of Women.
THURSDAY.—2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye.
FRIDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin.
SATURDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. Mr. B. Harman: Diseases of the Eye. 2 P.M., Medical and Surgical Clinics. X Rays. Operations.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.
MONDAY.—2 P.M., Operations. 2.15 P.M., Mr. Turner: Surgery. 3.15 P.M., Sir Dyce Duckworth: Medicine. 4.30 P.M., Mr. R. Lake: Ear and Throat. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat.
TUESDAY.—2 P.M., Operations. 3.15 P.M., Dr. R. Wells: Medicine. 2.15 P.M., Mr. R. Carling: Surgery. 4.15 P.M., Sir M. Morris: Diseases of the Skin. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin.

WEDNESDAY.—2 P.M., Operations. 2.15 P.M., Dr. F. Taylor: Medicine. 3.30 P.M., Mr. Cargill: Ophthalmology. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 11 A.M., Eye.
THURSDAY.—2 P.M., Operations. 2.15 P.M., Dr. G. Rankin: Medicine. 3.15 P.M., Sir W. Bennett: Surgery. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat.
FRIDAY.—2 P.M., Operations. 2.15 P.M., Sir J. Rose Bradford: Medicine. 3.15 P.M., Mr. McGavin: Surgery. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin.
SATURDAY.—10 A.M., Radiography. 11 A.M., Dr. A. Davies: Pathological Demonstration. 2 P.M., Operations. Out-patient Demonstration:—10 A.M., Surgical and Medical. 11 A.M., Eye.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, 49, Leicester-square, W.C.

TUESDAY.—6 P.M., Mr. W. Hampson: Electricity Cataphoresis.

ROYAL INSTITUTION OF GREAT BRITAIN, Albemarle-street, Piccadilly, W.

THURSDAY.—3 P.M., Prof. A. W. Crossley: Synthetic Ammonia and Nitric Acid from the Atmosphere. (Lecture II.)

ANCOATS HOSPITAL, Manchester.

THURSDAY.—4.15 P.M., Dr. C. H. Melland: Management of Dyspeptic Infants. (Post-Graduate Clinic.)

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (22nd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M.), St. Mark's (2.30 P.M.), Central London Throat and Ear (Minor 9 A.M., Major 2 P.M.).

TUESDAY (23rd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London, (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M., Ophthalmic, 2 P.M.), Tottenham (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.), Royal National Orthopædic (9.30 A.M. and 4 P.M.).

WEDNESDAY (24th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's 2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M., Dental, 2 P.M.), Tottenham (Ophthalmic, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

THURSDAY (25th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal National Orthopædic (9 A.M. and 3.30 P.M.), Royal Ear (2 P.M.), Children Gt. Ormond-street (9 A.M. and 2 P.M.), Tottenham (Gynæcological, 2.30 P.M.), West London (2.30 P.M), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

FRIDAY (26th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M., Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Royal National Orthopædic (3.30 P.M.), Soho-square (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), Tottenham (2.30 P.M.), St. Peter's (2 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

SATURDAY (27th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 A.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M.), West London (2.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic (2 P.M.), Hospital operations are performed daily.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITOR," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention should be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

TO SUBSCRIBERS.

WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, London, W.C., are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices.

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will insure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect.

THE COLONIAL AND FOREIGN EDITION (printed on thin paper) is published in time to catch the weekly Friday mails to all parts of the world.

The rates of subscriptions, post free from THE LANCET Offices, have been reduced, and are now as follows:—

FOR THE UNITED KINGDOM.		TO THE COLONIES AND ABROAD.	
One Year	£1 1 0	One Year	£1 5 0
Six Months	0 12 6	Six Months	0 14 0
Three Months	0 6 6	Three Months	0 7 0

(The rate for the United Kingdom will apply also to Medical Subordinates in India whose rates of pay, including allowances, is less than Rs.50 per month.)

Subscriptions (which may commence at any time) are payable in advance. Cheques and Post Office Orders (crossed "London County and Westminster Bank, Covent Garden Branch") should be made payable to the Manager, Mr. CHARLES GOOD, THE LANCET Offices, 423, Strand, London, W.C.

TO COLONIAL AND FOREIGN SUBSCRIBERS.

SUBSCRIBERS ABROAD ARE PARTICULARLY REQUESTED TO NOTE THE RATES OF SUBSCRIPTIONS GIVEN ABOVE.

The Manager will be pleased to forward copies direct from the Offices to places abroad at the above rates, whatever be the weight of any of the copies so supplied.

SOLE AGENTS FOR AMERICA—Messrs. WILLIAM WOOD AND CO., 51, Fifth Avenue, New York, U.S.A.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, April 17th, 1912.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rain fall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
April 11	29·93	N.W.	...	100	53	37	40	43	Fine
,, 12	30·40	N.	...	94	49	37	37	41	Fine
,, 13	30·47	W.	...	92	54	41	42	45	Fine
,, 14	30·42	W.	...	82	56	45	46	47	Overcast
,, 15	30·38	N.E.	...	80	56	41	42	43	Overcast
,, 16	30·31	E.	...	105	59	40	45	47	Fine
,, 17	30·10	E.	...	97	59	45	45	47	Overcast

The following journals, magazines, &c., have been received:—Surgical Clinics, Chicago, Annali dell' Istituto Maragliano, Archives of the Roentgen Ray, American Journal of Gastro-enterology, Bulletin of the Johns Hopkins Hospital, Local Government Review, South African Medical Record, Revue de Chirurgie, Revue de Médecine, Eugenics Review, St. Louis Medical Review, Children's Diseases, St. Paul Medical Journal, Cleveland Medical Journal, Veterinary Journal, Yellow Fever Bureau Bulletin, Revue de Psychiatrie, Symons's Meteorological Magazine, Women's Industrial News, &c.

Communications, Letters, &c., have been received from—

A.—Messrs. Allen and Hanburys, Lond.; Messrs. Attwood and Binsted, Lond.; Avon Vale (Wilts) Bacon Curing Co., Chippenham; Messrs. Arnold and Sons, Lond.; Ardath Tobacco Co., Lond.; Mr. F. W. Alexander, Lond.; Ariel and General Repairs, Lond., Managing Director of; Alnwick Infirmary, Secretary of; Admiralty, Medical Department of, Director-General of; Mr. O. L. Addison, Lond.

B.—Mr. G. Burcombe, Lincoln; Bury Infirmary, Secretary of; Mr. J. Beattie, Belfast; Messrs. Boulton and Paul, Norwich; Dr. W. C. Bosanquet, Lond.; Dr. W. A. Brend, Lond.; *The Bioscope*, Lond., General Manager of; Messrs. Brown Bros., Lond.; Bootle Borough Hospital, Secretary of; Dr. P. Barbier, Rome; Mr. W. Girling Ball, Lond.; Dr. John Biernacki, Lond.; Dr. G. S. Banks, Aberdeen; Sir John Byers, Belfast; Mr. E. Barton, Paignton; Dr. S. Bernheim, Rome; Dr. Charles Bage, Melbourne; Messrs. Butler and Son, Lond.; Burnley Union, Clerk to the; Dr. C. H. Benham, Hove; Messrs. Charles Barker and Sons, Lond.

C.—County of Cumberland, Carlisle, Clerk to the; *Chambers's Journal*, Edinburgh, Editor of; Messrs. Constable and Co., Lond.; Messrs. Cassell and Co., Lond.; Mr. H. A. Collins, Croydon; Messrs. Cowie and Co., Lond.; Messrs. J. and A. Churchill, Lond.; Colonial Office, Lond.; Mr. J. R. Crease, South Shields; Chelsea Clinical Society, Editorial Secretary of; Captain Colin Clarke, I.M.S., Malta; Chelsea Hospital for Women; Secretary of; Clayton Hospital, Wakefield, Secretary of; Cheltenham General Hospital, Secretary of; Mrs. G. L. Caple, Bristol; Dr. A. Castellani, Colombo.

D.—Denbighshire Infirmary, Denbigh, Secretary of; Messrs. Dyer, Son, and Hilton, Lond.; Mrs. A. Lloyd Davis, Bognor; Mr. W. F. Dearden, Manchester; Denver Chemical Co., Lond.; Sir H. Bryan Donkin, Lond.; Mr. B. Dunlop, Brasted; Mr. H. Dickinson, Lond.; Dr. Edgar Du Cane, Lond.; Dorset County Asylum, Dorchester, Clerk to the.

E.—Mr. R. K. Ellison, Godmanchester; E. J.

F.—Dr. Duncan Forbes, Brighton; Factories, Chief Inspector of; Messrs. C. Fryer and Sons, Lond.; Mr. Gustav Fischer, Jena; Messrs. Fannin and Co., Dublin; Messrs. Fassett and Johnson, Lond.

G.—Mr. Michael Gaertner, Nuremberg; Dr. R. M. Gil, Malaga; Dr. R. J. Gardiner, Craigwood, Canada; Dr. M. Greenwood, Lond.; Dr. O. Grünbaum, Lond.; Mr. H. R. Gawen Gogay, Southend-on-Sea; Dr. C. Gorostidi, Madrid; Gloucestershire Royal Infirmary, Gloucester, Secretary of.

H.—Dr. Arthur B. Horn, Lond.; Mr. Edward Hall, Lond.; Messrs. A. Hyams and Co., Lond.; Herefordshire General Hospital, Hereford, Secretary of; Hampden Residential Club, Lond., Secretary of; Dr. A. D. Hughes, Deal; Dr. Arthur J. Hall, Sheffield; Dr. J. A. Braxton Hicks, Lond.; Hunterian Society, Lond.; Hon. Secretary of; Dr. J. J. Hodder, Lond.; Mr. T. H. Hewitt, Lond.; Mr. C. S. Hawes, Liphook; Messrs. Hazell, Watson, and Viney, Lond.; Dr. D. M. Hutton, Birkdale.

I.—Institute of Linguists, Lond., Hon. Treasurer of; Islington Guardians, Lond., Clerk to the; Dr. A. C. Inman, Lond.

J.—Mr. W. Foulkes Jones, Lond.; J. W. R.; J. P.; Messrs. W. and R. Jacob and Co., Dublin.

K.—Messrs. Knoll and Co., Lond.; Mr. J. Kennish, Lond.; Kennedy Hospital, Cambay, Chief Medical Officer of.

L.—Leeds General Infirmary, Secretary of; Dr. C. Lillingston, Hemel Hempstead; Liverpool Medical Institution, Secretary of; Dr. David Ligat, St. Leonards-on-Sea; Mr. H. K. Lewis, Lond.; Mr. B. T. Lang, Lond.; Messrs. Lee and Nightingale, Liverpool; Dr. A. E. Larking, Buckingham; Mr. L. F. Leslie, Evesham; Dr. E. B. Leach, Manchester; Messrs. R. T. Lang, Lond.; London Hospital Medical College, Lond., Secretary of.

M.—Messrs. Matthew, Brown, and Co., Preston; Messrs. Mather and Crowther, Lond.; Mr. L. G. Chiozza Money, M.P., Chaldon; *Morning Leader*, Lond., Editor of; Messrs. Maythorn and Son, Biggleswade; Messrs. C. Mitchell and Co., Lond.; Dr. S. MacIlwaine, Clevedon; Mr. W. J. Middleton, Lond.; Mr. J. MacMunn, Lond.; Dr. Horace Manders, Lond.; Dr. Reginald Morton, Lond.; Mural Decoration Committee, Lond., Hon. Secretaries of; Mr. R. Mosse, Berlin; Mr. J. B. Macalpine, Salford; Messrs. Menzies and Co., Glasgow; Medical Correspondence College, Lond.; Middlesex Hospital Medical School, Lond., Dean of.

N.—Northumberland House, Lond., Proprietors of.

O.—Oxford Medical Publications, Lond., Manager of; Mr. Joseph Offord, Lond.

P.—Dr. L. B. Perry, Hythe; *The Police Review and Parade Gossip*, Lond.; Mr. E. Pennington, Richmond; Dr. F. J. Poynton, Lond.; Mr. J. Herbert Parsons, Lond.; Dr. P. N. Panton, Lond.

Q.—Mr. George Quick, Maidenhead.

R.—Royal Infirmary, Sunderland, Secretary of; Dr. Henry Robinson, Lond.; Royal Society, Lond., Assistant Secretary of; Royal Society of Arts, Lond.; Royal Infirmary, Sheffield, Secretary of; Royal Infirmary, Huddersfield, Secretary of; Roborat Co., Lond.; Dr. W. T. G. Robinson, Poole; Royal College of Surgeons in Ireland, Dublin, Registrar of; Mr. M. R. Rhodes, Didsbury; Dr. W. F. Roach, Lond.; Dr. Charles Russ, Lond.; Mr. R. Robinson, Lond.; Rochester, &c., Printing Co., Manager of; Royal Institution of Public Health, Lond., Secretary of; Royal Meteorological Society, Lond.

S.—Scholastic, Clerical, and Medical Association, Lond.; *South Wales Argus*, Newport, Manager of; *Shrewsbury Chronicle*, Manager of; Solicitor, Bristol; Salford Royal Hospital, Secretary of; Messrs. G. Street and Co., Lond.; Smith's Advertising Agency, Lond.; St. Mary's Hospital for Women and Children, Lond., Secretary of; Mr. R. B. Sargeant, Lond.; Dr. D. Sommerville, Lond.; Dr W. Knowsley Sibley, Lond.; Dr. F. Spranger-Bartholomew, Milan; Sir J. Sawyer, Birmingham; Scout Motors, Salisbury, Manager of; Southampton Union, Clerk to the; Stoke-on-Trent and Stoke Royal Joint Hospital Board, Clerk to the; Mr. Ernest H. Shaw, Lond.; Scottish Medical Insurance Council, Edinburgh, Interim Secretary of; Soldiers' and Sailors' Help Society Incorporated, Lond., Secretary of; Dr. C. E. de M. Sajous, Philadelphia; St. John's Hospital for Diseases of the Skin, Lond.; Mr. Robinett Scruby, Lond.; Mr. A. C. Shoppee, Lond.; Dr. J. Sinclair, Lond.; St. John Ambulance Association, Peshawar, Secretary of; Mr. C. E. Stromeyer, West Didsbury.

T.—Dr. N. Tattersall, Lond.; Dr. R. Thurnam, Blagdon; Messrs. W. Thacker and Co., Lond.; Taluk Board, Melur, India, President of; Dr. P. C. E. Tribe, Cairo; Dr. John J. Tobin, Ilkeston; Dr. Trembur, Osnabrück.

W.—Williams Advertising Agency, Bradford; Dr. Ethel Williams, Newcastle-on-Tyne; Dr. A. M. Webber, Nottingham; Wolverhampton General Hospital, Secretary of; Winsley Sanatorium, Secretary of; Captain T. S. B. Williams, I.M.S., Llanystumdwy; Dr. M. H. Williams, Colwall; Messrs. J. Wright and Son, Bristol; Dr. S. West, Lond.; Mr. W. Whiteley, Lond.; West End Hospital for Diseases of Nervous System, Lond., Secretary of.

Z.—Dr. Theodor Zangger, Zürich.

Letters, each with enclosure, are also acknowledged from—

A.—Ayr District Asylum, Medical Superintendent of; Messrs. Appleton and Co., Lond.

B.—Mr. R. W. Brockman, Lond.; Bolingbroke Hospital, Lond., Secretary of; Beckett Hospital, Barnsley, Matron of; Mr. F. H. Byam, Lond.; Dr. C. Burns, Newmilns; Captain C. H. Barber, I.M.S., Dera Ismail Khan, India; Birmingham and Midland Free Hospital for Sick Children, Secretary of; Bombay Medical Union, Secretary of; Dr. R. T. Bakewell, Lond.; Mr. H. Bazett, Cambridge; Mr. F. W. Bemister, Christchurch; Mr. E. Baker, Birmingham.

C.—Mr. A. W. S. Curties, Burwash; Messrs. Crossley and Co., Lond.; Dr. J. Cropper, Chepstow; Dr. W. Calwell, Belfast.

D.—Dr. J. W. Duffus, Port Elizabeth; Dr. J. H. Davies, Port Talbot.

E.—Mr. R. Edwards, Hastings; E. W. B.; E. M. C.; Mr. E. Evans, Felinfach; Mr. A. R. Elliott, New York; Dr. J. W. H. Eyre, Lond.; E. F. P.; R. D.

F.—Mr. C. E. Falconbridge, Nottingham.

G.—Miss H. H. Grinling, Woolwich; Miss M. E. Greenwood, Sheffield; Mr. H. Bellamy Gardner, Lond.; Gonville, Queen's Club Gardens; G. B.

H.—Messrs. A. Heywood and Son, Manchester; Dr. H. W. Hake, Lond.; Dr. T. B. Hyslop, Lond.; Hospital of St. John and St. Elizabeth, Lond., Secretary of; Haydock Lodge, Newton-le-Willows, Medical Superintendent of; H. G. C.; H. W. D.

I.—Lieutenant M. L. C. Irvine, I.M.S., Cawapore; International Plasmon, Ltd., Lond.

J.—Messrs. J. Jones and Co., Bournemouth; J. R. C. C.; J. P. B.; J. R. T.

K.—Miss Kemp, St. George's, Salop; Kesteven County Asylum, Sleaford, Clerk to the; K. V. T.; Dr. L. Kidd, Enniskillen; Messrs. C. Knight and Co., Lond.

L.—Mr. H. Le Soudier, Paris; Lady Superintendent, Wanstead; "Locum," Steeple Claydon; Dr. G. B. Learmouth, High River, Canada; Mr. D. L. Lewis, Lond.; Loughborough and District General Hospital, Secretary of.

M.—Messrs. Marshall, Gibbons, and Co., Manchester; Messrs. J. Menzies and Co., Edinburgh; Messrs. J. Maclehose and Sons, Glasgow; Dr. R. Milne, Lond.; Medicus, Lond.; Dr. J. F. Macdonald, Bishop Auckland; Mullingar District Asylum, Medical Superintendent of; "Medicus," Highams Park; Dr. D. McKail, Glasgow; Medical Notes and Queries Co., Philadelphia, Manager of; Messrs. Z. P. Maruya and Co., Yokohama; Messrs. Masson et Cie, Paris; Mr. L. S. Machado, Tuticorin; Moat House, Tamworth, Medical Superintendent of.

N.—Mr. E. H. T. Nash, Manchester; Messrs. F. Newbery and Sons, Lond.; Mr. S. K. Nanjiani, Chota Udepur; North Staffordshire Infirmary, Hartshill, Secretary of.

O.—Mr. D. O'Sullivan, Kinsale; O. A. W.

P.—Prospect Hotel, Harrogate, Manager of; Paddington-street (66), Lond.; Mr. H. M. Phipson, Lond.; "Peacey," Lond.; Poultogen Co., Manchester.

R.—Mr. P. B. Roth, Lond.; R. A. M.; Regulin Syndicate, Lond.; Research Defence Society, Lond., Hon. Secretary of; Retreat, York, Secretary of; Royal Albert Institution, Lancaster, Secretary of; Messrs. Reynolds and Branson, Leeds.

S.—Mr. G. C. Stamper, Buxton; Messrs. W. H. Smith and Son, York; Sports Club, Lond., Secretary of; Mr. P. T. Spencer-Phillips, Chelmsford; Mr. C. F. Strange, Hang Chow; Society of Chemical Industry in Basle, Lond.; Dr. St. C. B. Shadwell, Lond.; Dr. W. S. Syme, Glasgow; Sirdar Rubber Co., Lond.; Mr. J. L. Smith, Cardiff.

W.—Dr. W. Hale White, Lond.; West Suffolk General Hospital, Bury St. Edmunds, Secretary of; Mr. R. Watts, Wallingford; Dr. J. Weir, Lond.; W. P.; West Sussex and Southern United Districts, Brighton, Clerk to the; W. K. P.

Y.—Dr. S. Yeoman, Prestwich.

EVERY FRIDAY.

THE LANCET.

PRICE SIXPENCE.

SUBSCRIPTION, POST FREE.

FOR THE UNITED KINGDOM.*		TO THE COLONIES AND ABROAD.	
One Year	£1 1 0	One Year	£1 5 0
Six Months	0 12 6	Six Months	0 14 0
Three Months	0 6 6	Three Months	0 7 0

* *The same rate applies to Medical Subordinates in India.*

Subscriptions (which may commence at any time) are payable in advance.

ADVERTISING.

Books and Publications	
Official and General Announcements	Five Lines and under £0 4 6
Trade and Miscellaneous Advertisements and Situations Vacant ...	Every additional Line 0 0 6
Situations wanted: First 30 words, 2s. 6d.; per additional 8 words, 6d.	
Quarter Page, £1 10s. Half a Page, £2 15s. An Entire Page, £5 5s.	

Special terms for Position Pages.

Cheques and Post Office Orders (crossed "London County and Westminster Bank, Covent Garden Branch") should be made payable to the Manager, Mr. CHARLES GOOD, THE LANCET Office, 423, Strand, London, to whom all letters relating to Advertisements or Subscriptions should be addressed